

DRAFT
North Fork Coal
ENVIRONMENTAL IMPACT STATEMENT
Delta and Gunnison Counties, Colorado
September 1999



FIGURES

Lead Agencies:



USDI Bureau of Land Management



USDA Forest Service

Cooperating Agency:

USDI Office of Surface Mining Reclamation & Enforcement

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North Fork Coal

Draft

ENVIRONMENTAL IMPACT STATEMENT

September 1999



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U.S. Department of the Interior
Bureau of Land Management
Colorado State Office
Uncompahgre Field Office

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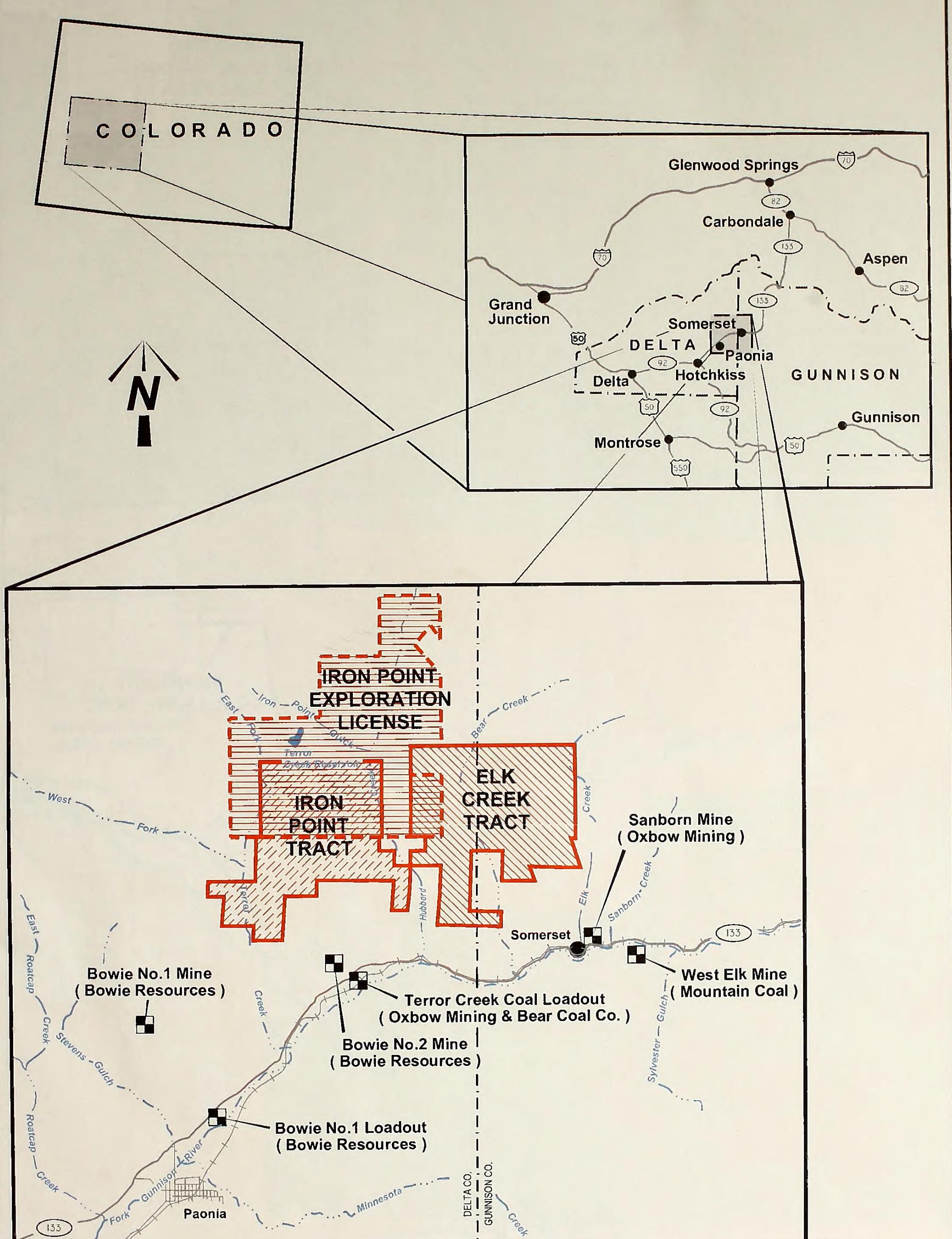
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U.S. Department of Agriculture
Forest Service
Rocky Mountain Region
Grand Mesa, Uncompahgre
and Gunnison National Forest

Cooperating Agency:

U.S. Department on the Interior
Office of Surface Mining Reclamation and Enforcement
Western Regional Coordinating Center

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North Fork Coal DRAFT EIS

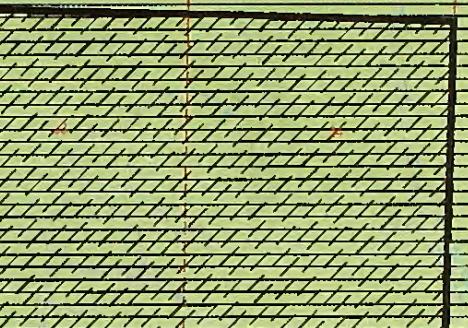
FIGURE 1
GENERAL LOCATION MAP

**IRON POINT
COAL EXPLORATION
LICENSE AREA**

1

Grouse Spring

Iron Point



**IRON POINT
COAL LEASE TRACT
■ BOWIE No.2 MINE
PORTAL AREA**

Bowie

Juanita Junction

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Peonia

R. 92 W.

R. 91 W.

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Morell Cow Camp

AQUEDUCT

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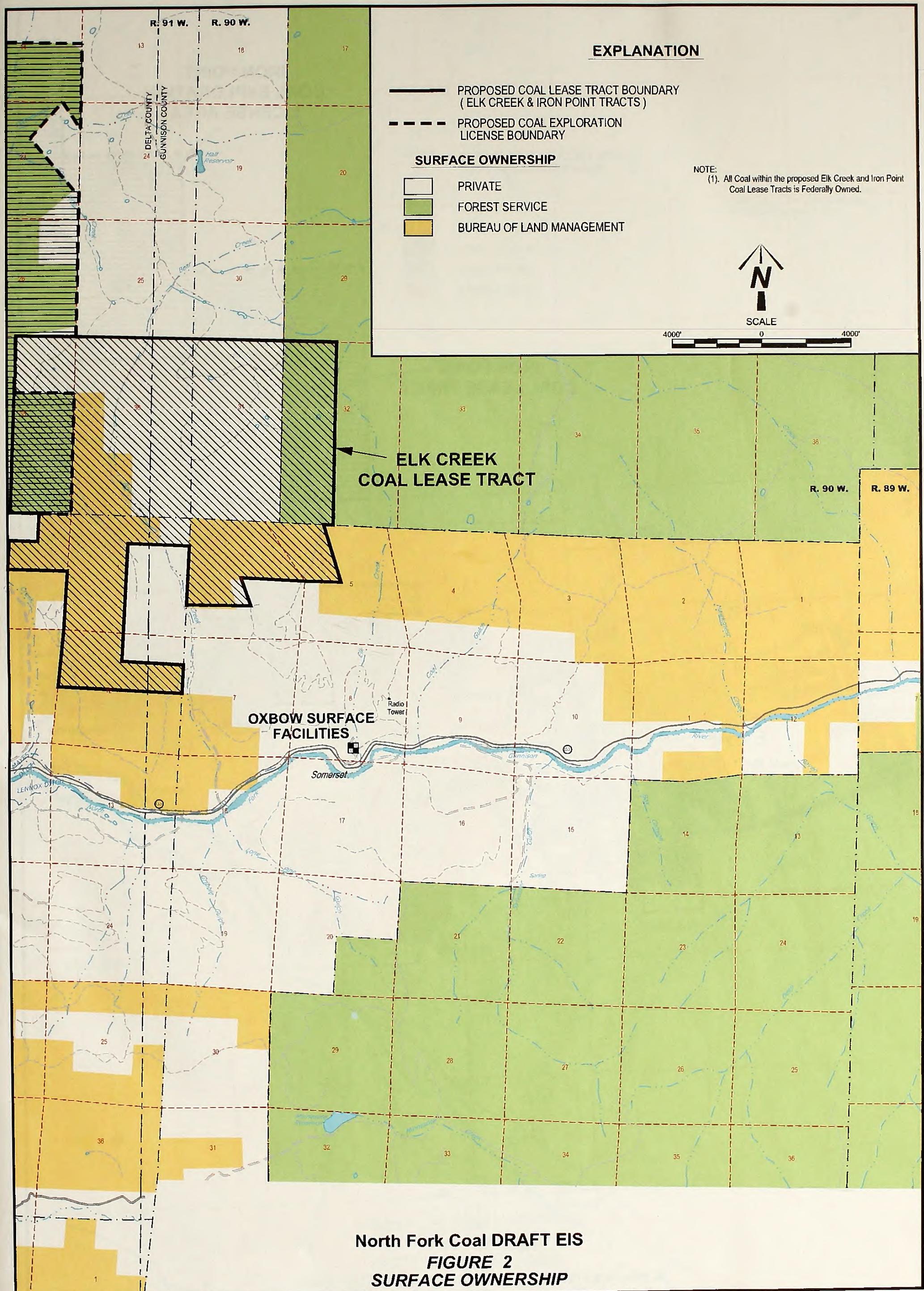
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**IRON POINT
COAL EXPLORATION
LICENSE AREA**

**IRON POINT
COAL LEASE TRACT**

C-53356

C-37210

Bowie No. 1

C-27432

C-25079

C-36995

Farmers

Bowie No. 2

Kingmine

Juanita Junction

R. 92 W. R. 91 W.

Paonia

Julian Ditch

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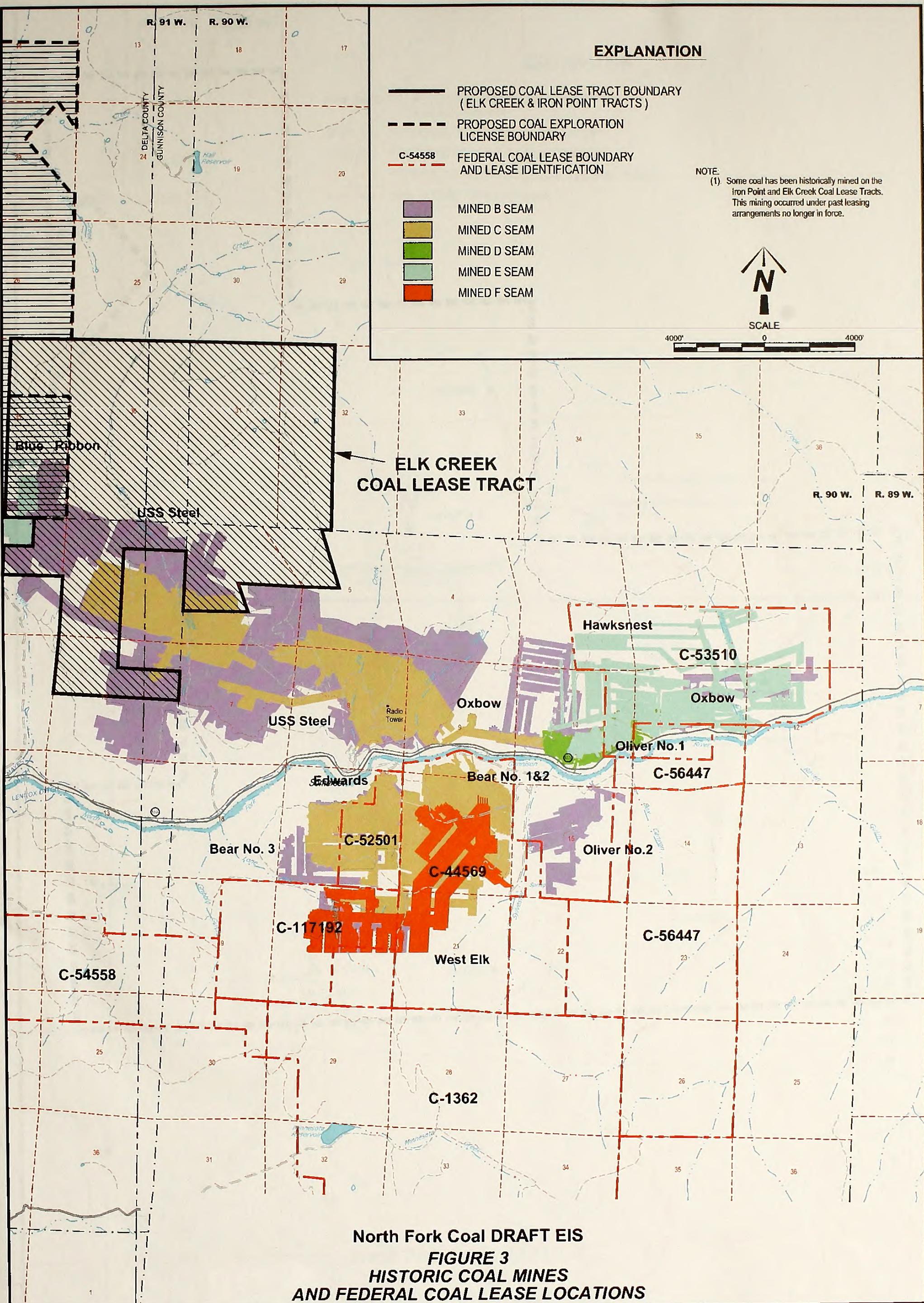
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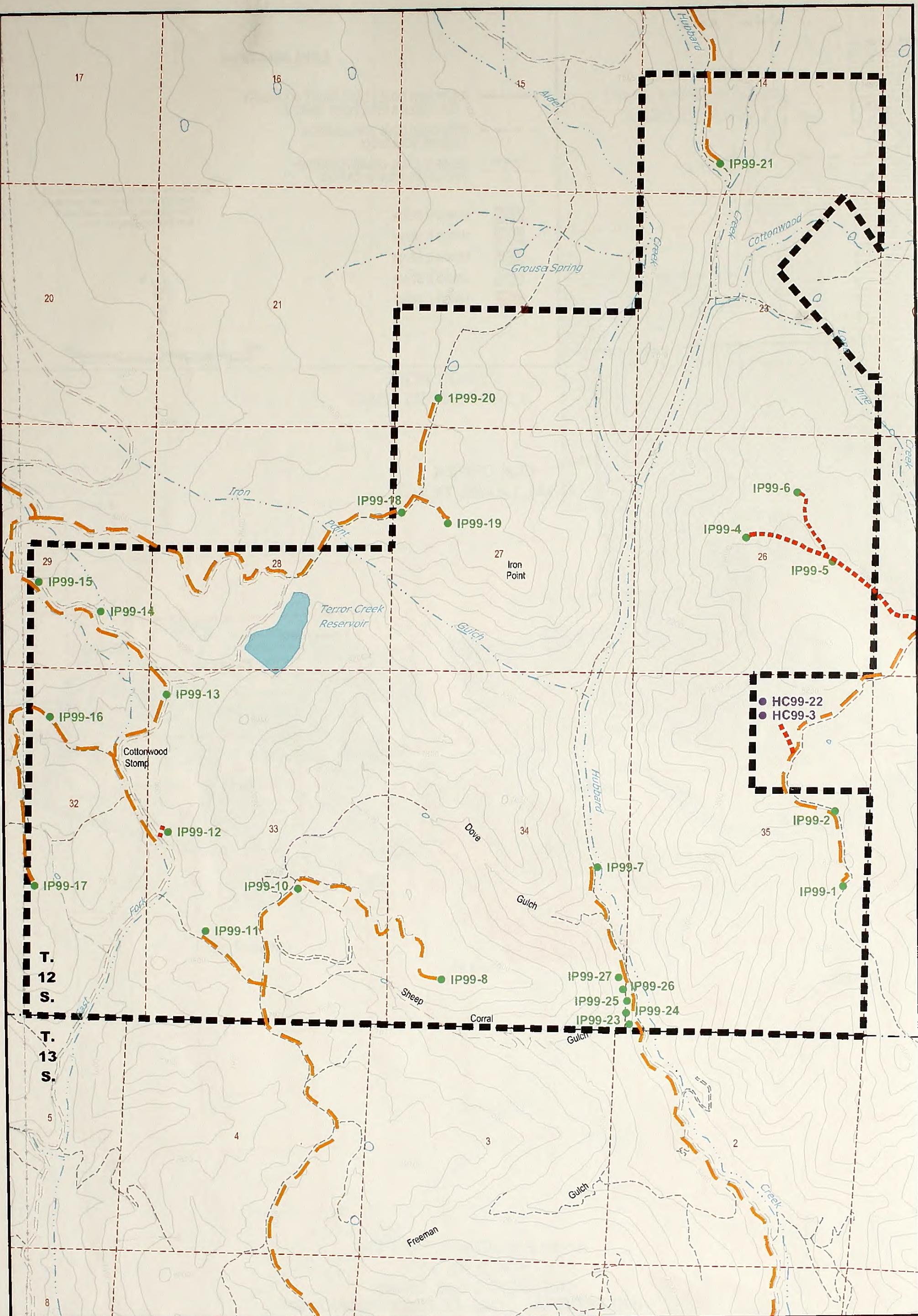
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R. 91 W. R. 90 W.

DELTA COUNTY
GUNNISON COUNTY

EXPLANATION

- PROPOSED IRON POINT COAL EXPLORATION LICENSES BOUNDARY
- IP99-1 ● PROPOSED DRILL HOLE (Federal Surface)
- HC99-3 ● PROPOSED DRILL HOLE (Private Surface)
- PROPOSED EXPLORATION ACCESS (Existing Roads)
- NEW ACCESS ROAD (Temporary)



SCALE

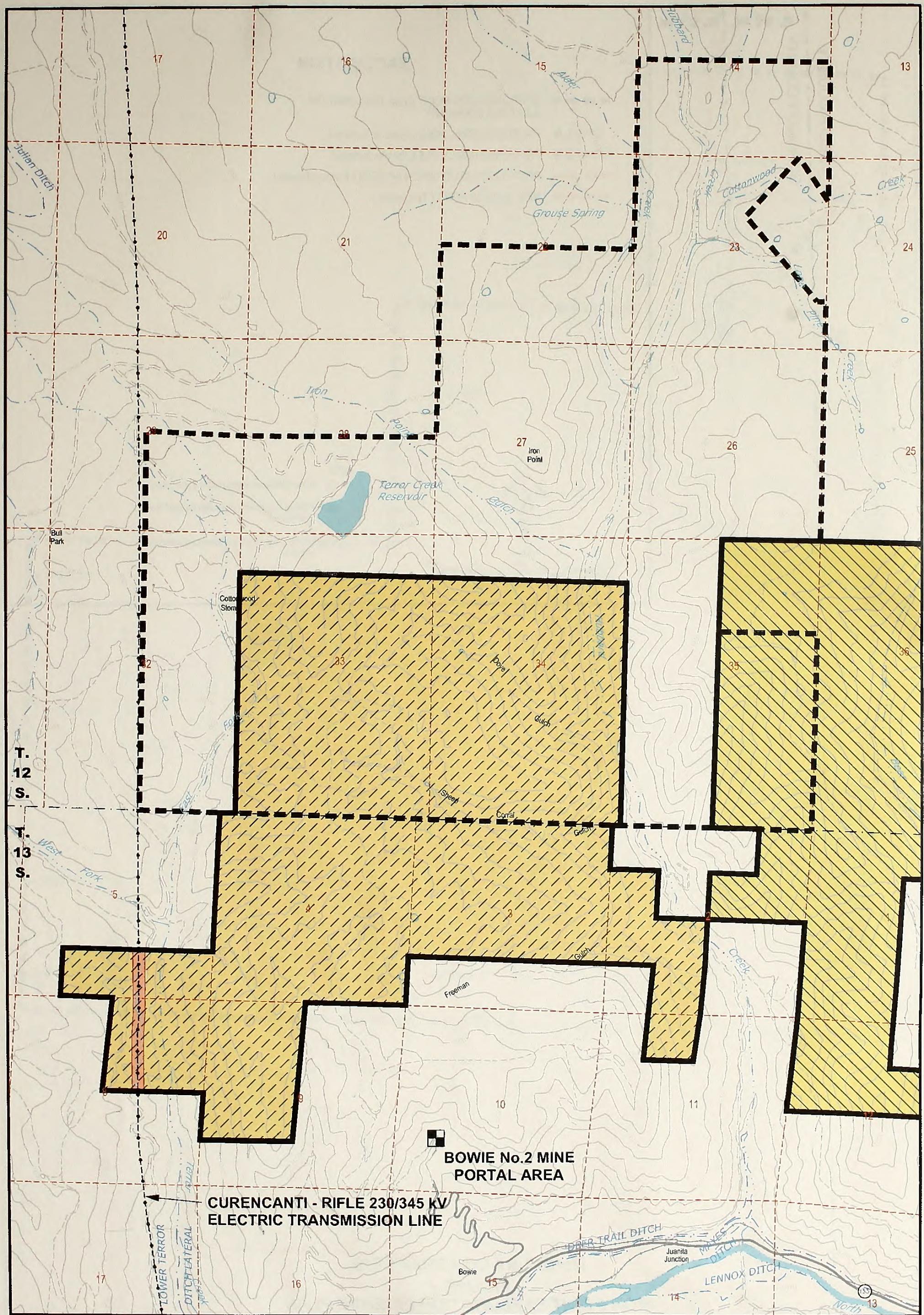
2000' 0 2000'
CONTOUR INTERVAL 200FT.

NOTE:

- Drilling Activities must occur within 2 year period.
- All Drilling must comply with Forest Service / BLM stipulations.
- Reclamation of drill sites and new road access is required.

North Fork Coal DRAFT EIS

FIGURE 4
IRON POINT EXPLORATION LICENSE PLAN



R. 91 W. R. 90 W.
DELTA COUNTY GUNNISON COUNTY

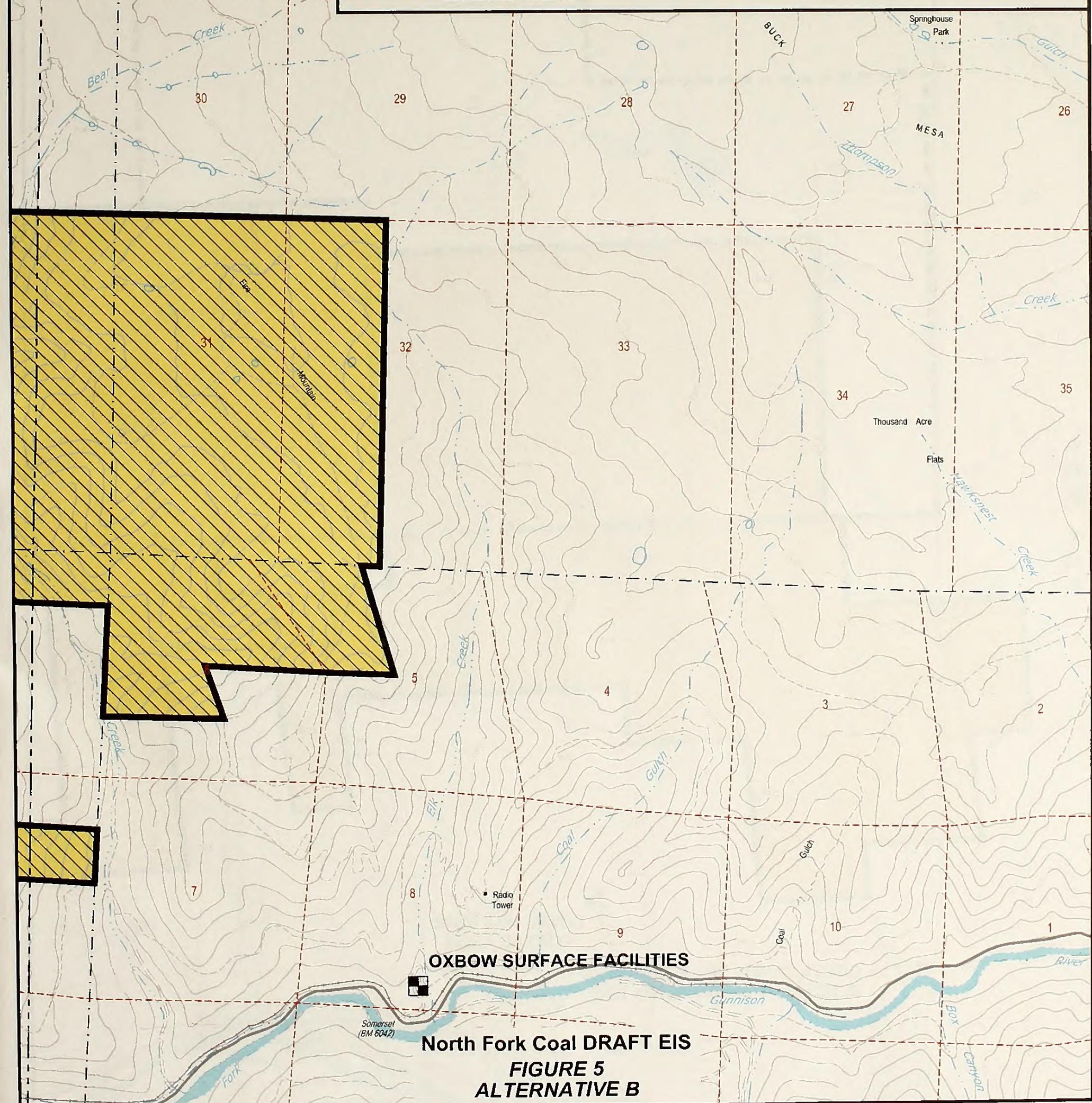
EXPLANATION

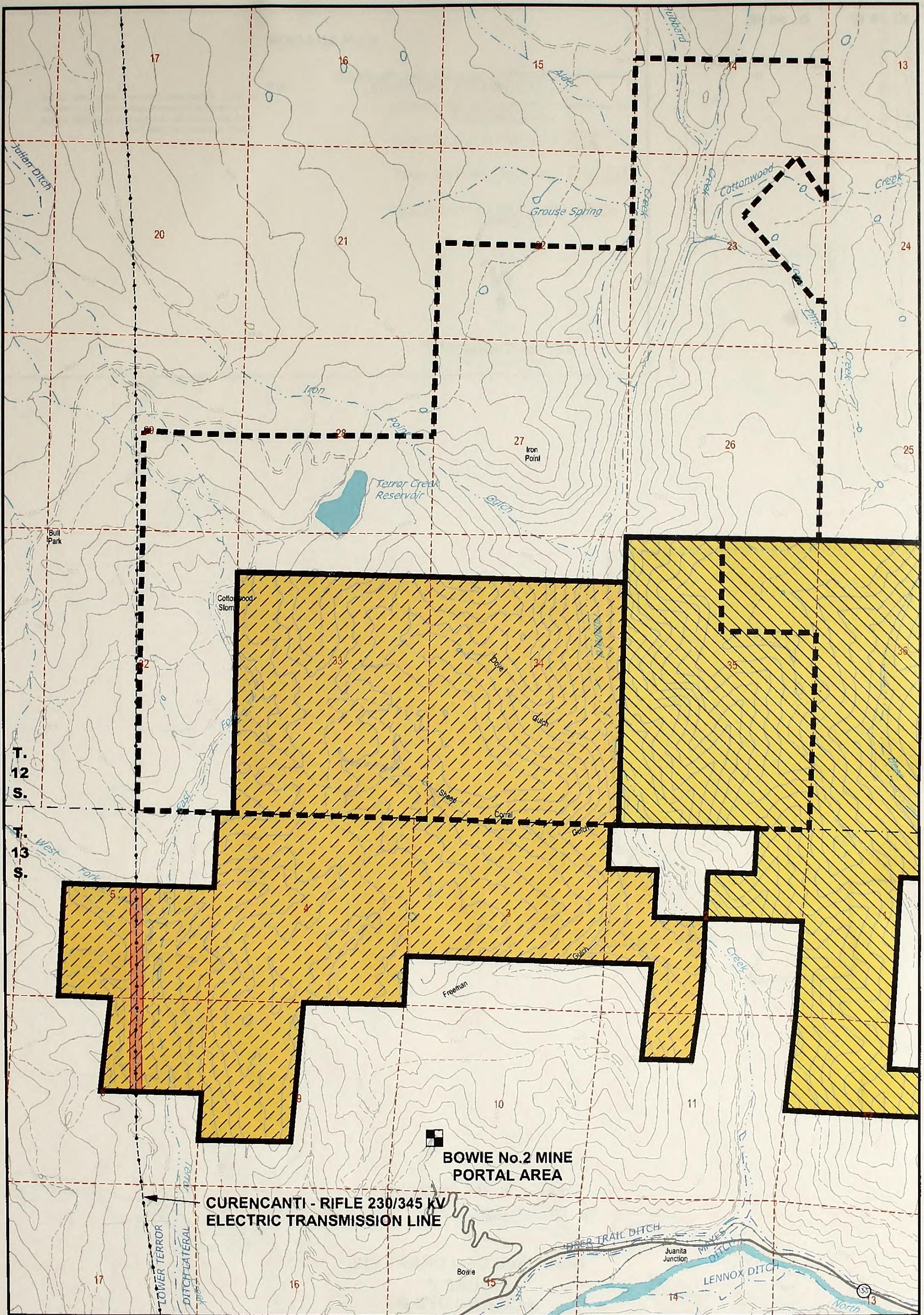
- PROPOSED COAL LEASE TRACT BOUNDARY (ELK CREEK & IRON POINT TRACTS)
- PROPOSED COAL EXPLORATION LICENSE BOUNDARY
- IRON POINT COAL LEASE TRACT
- ELK CREEK COAL LEASE TRACT
- POWERLINE PROTECTION ZONE (SEE NOTE No.1)

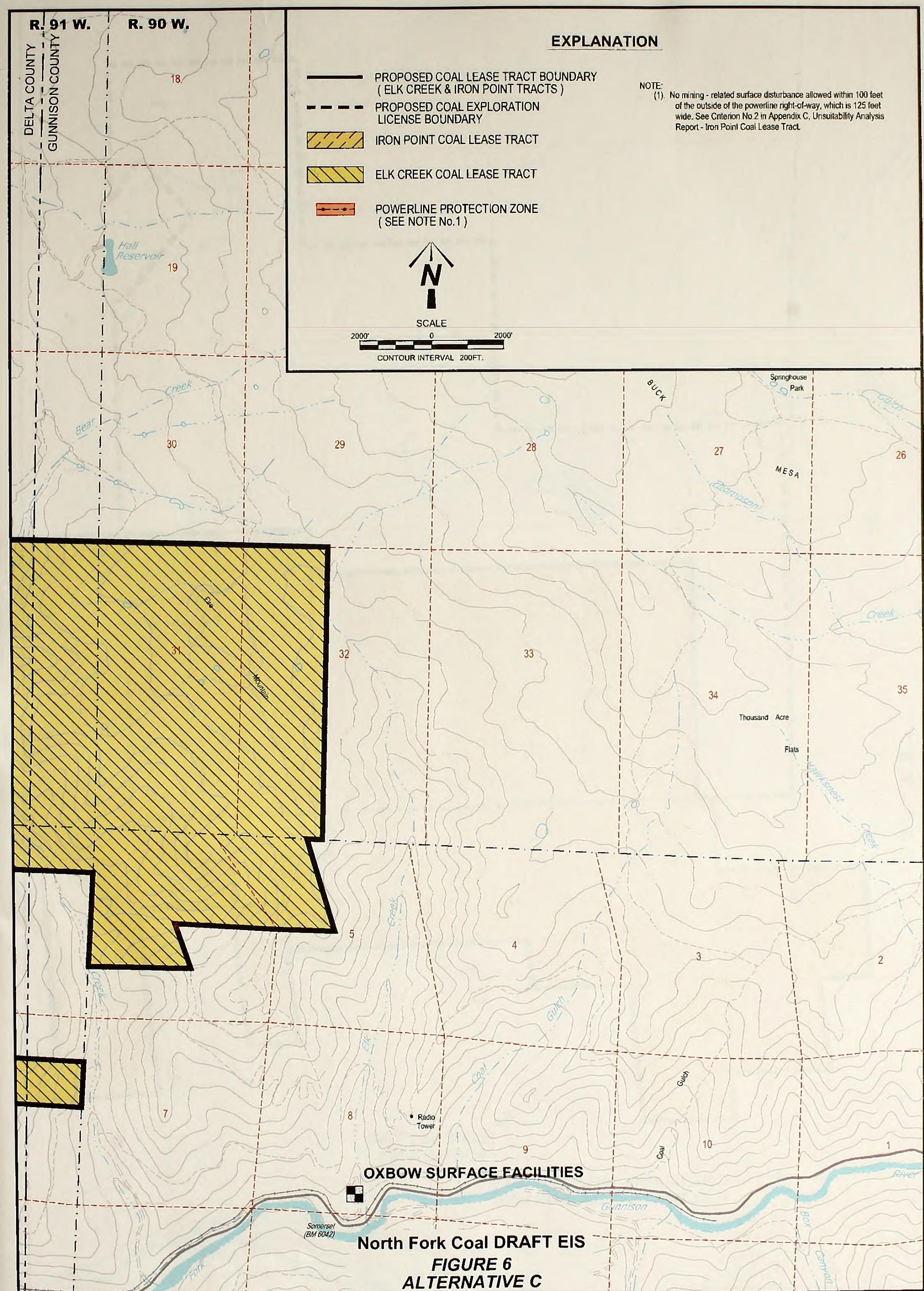
NOTE:
(1). No mining - related surface disturbance allowed within 100 feet of the outside of the powerline right-of-way, which is 125 feet wide. See Criterion No.2 in Appendix C, Unsuitability Analysis Report - Iron Point Coal Lease Tract.

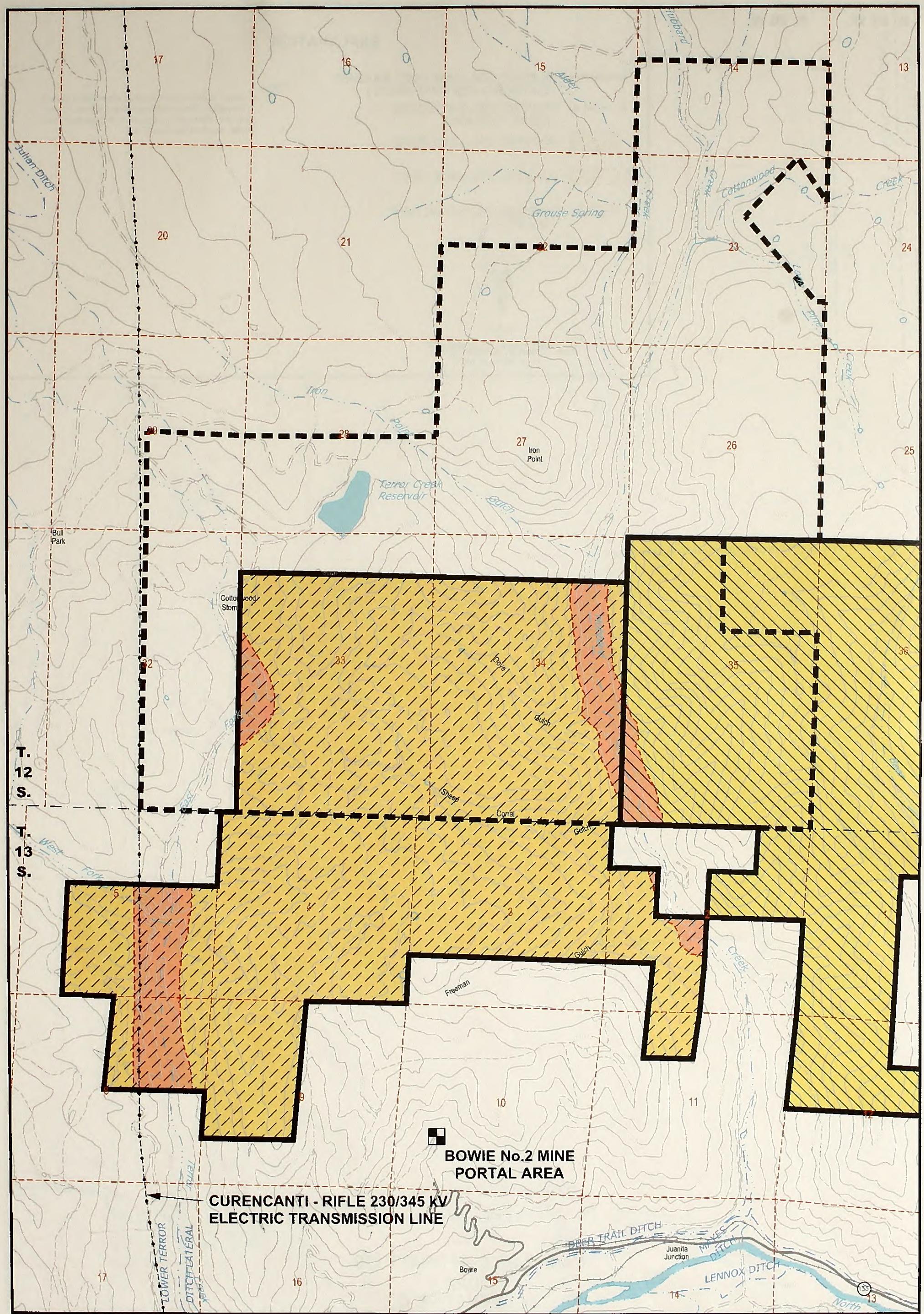


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R. 91 W.

R. 90 W.

DELTA COUNTY
GUNNISON COUNTY

EXPLANATION

- PROPOSED COAL LEASE TRACT BOUNDARY (ELK CREEK & IRON POINT TRACTS)
- PROPOSED COAL EXPLORATION LICENSE BOUNDARY
- IRON POINT COAL LEASE TRACT
- ELK CREEK COAL LEASE TRACT
- SUBSIDENCE PROTECTION ZONE

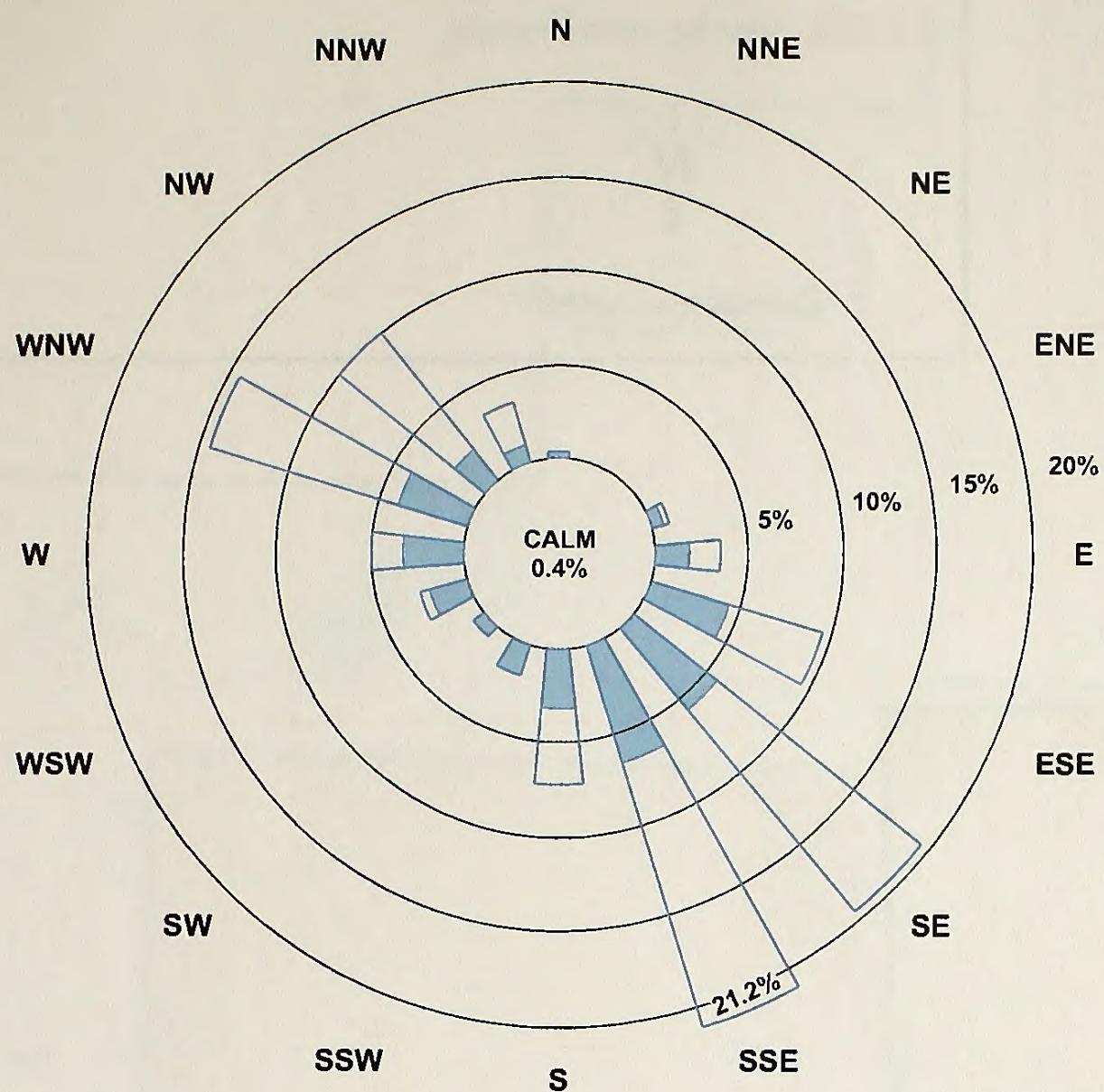


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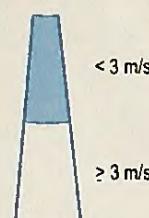
North Fork Coal DRAFT EIS

FIGURE 7
ALTERNATIVE D



AVERAGE WIND SPEED = 3.6 m/s

EXPLANATION



< 3 m/s

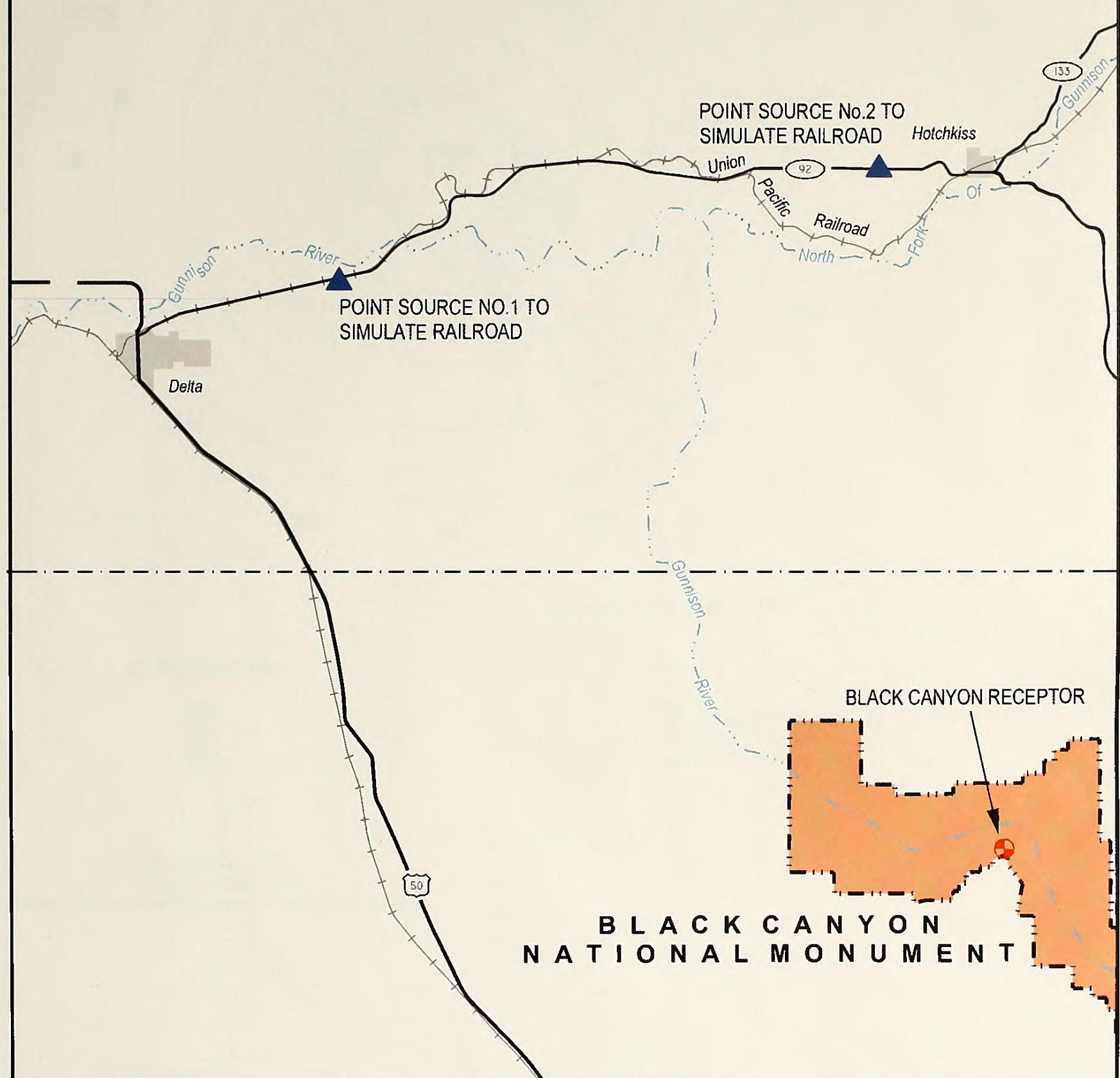
≥ 3 m/s

CALMS ARE WINDS WITH
SPEEDS LESS THAN 0.44 m/s
SHOWN AS DIRECTION FROM WHICH WIND IS BLOWING

NOTE:

- (1). From West Elk Mine in Gunnison County, Colorado
- (2). Data Taken March 1987 through August 1987
- (3). SOURCE: Air Sciences Inc. of Lakewood, Colorado

North Fork Coal DRAFT EIS
FIGURE 8
WIND ROSE FOR WEST ELK MINE



EXPLANATION

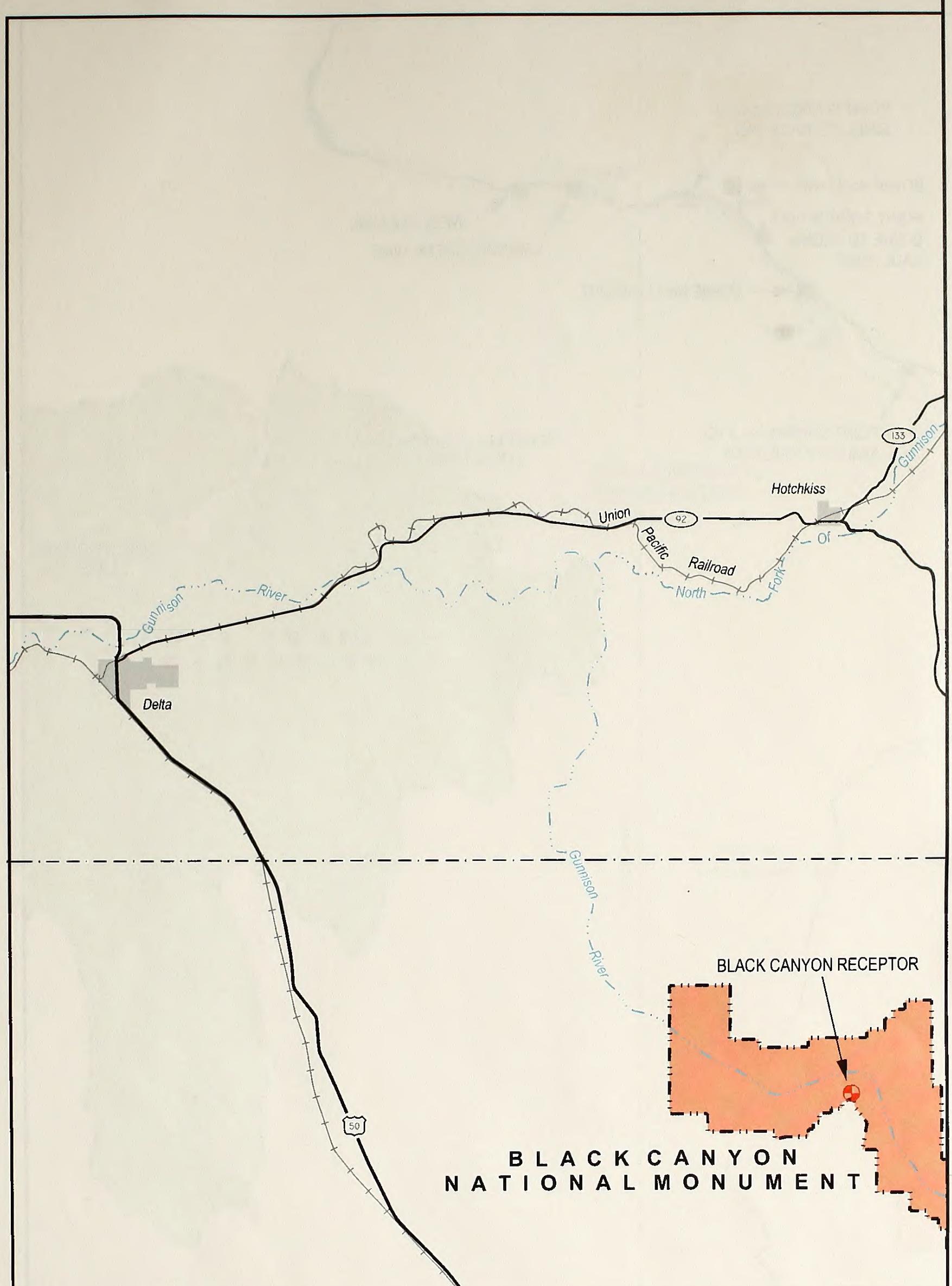
- IRON POINT COAL LEASE TRACT
- ELK CREEK COAL LEASE TRACT
- POINT SOURCE LOCATION



SCALE
12,000' 0 12,000'



North Fork Coal DRAFT EIS
FIGURE 9
EMISSION SOURCES AND WILDERNESS AREA
RECEPTORS FOR VISIBILITY AND ACID DEPOSITION MODELING



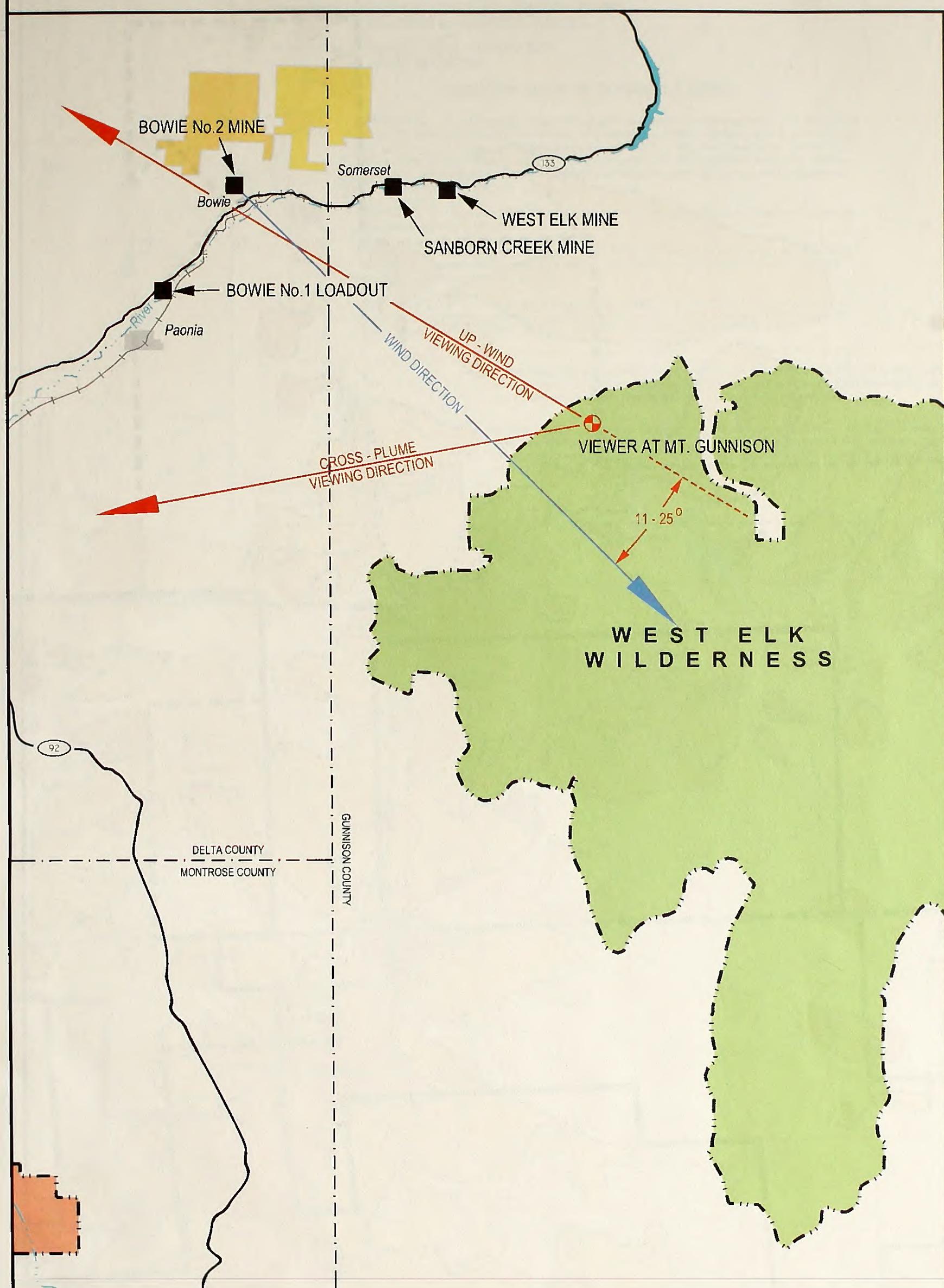
EXPLANATION

- IRON POINT COAL LEASE TRACT
- ELK CREEK COAL LEASE TRACT
- VIEWING DIRECTION
- WIND DIRECTION

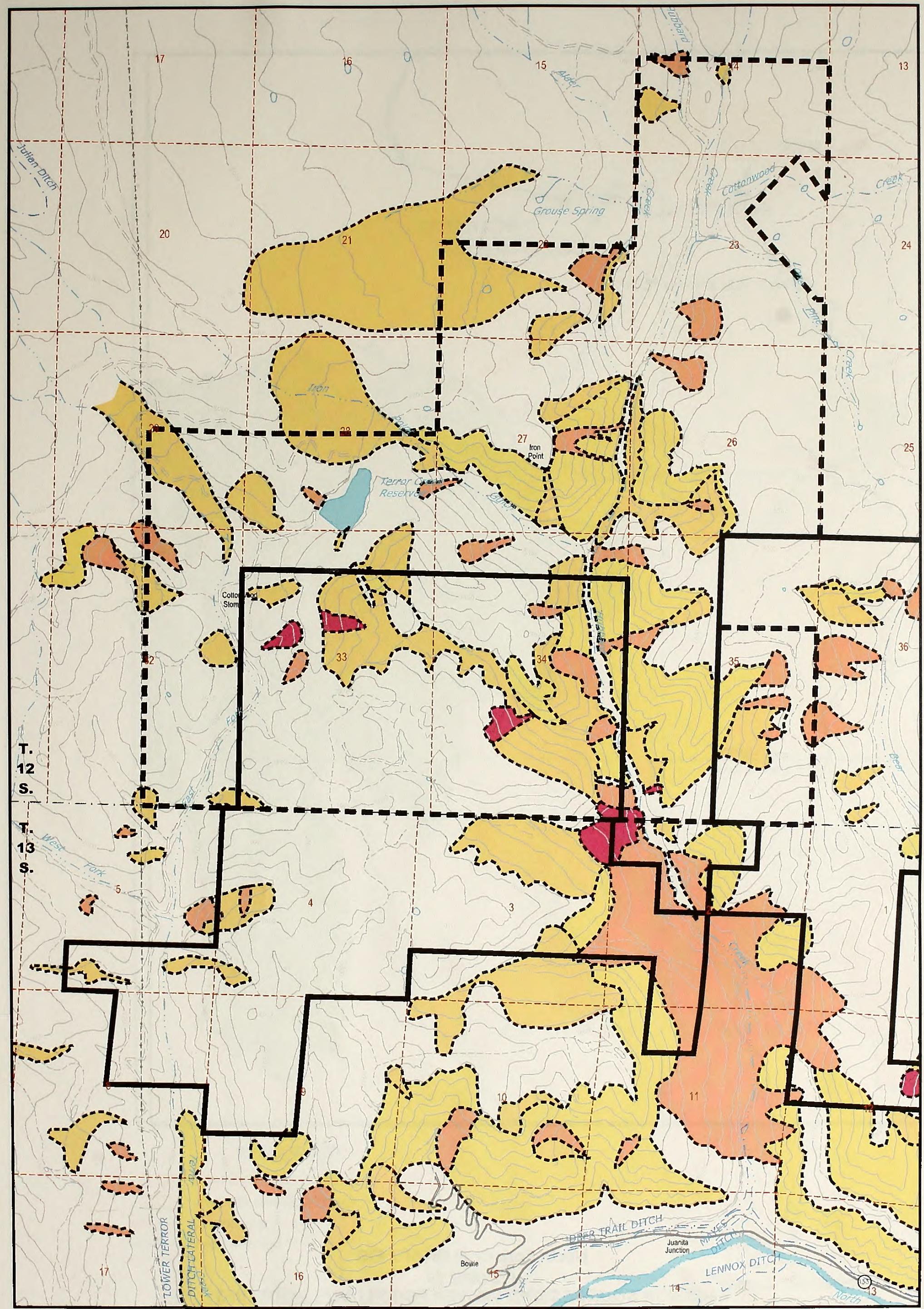


SCALE

12,000' 0 12,000'



North Fork Coal DRAFT EIS
FIGURE 10
EMISSION SOURCES AND VIEWER FOR PLUVUE MODELING



R. 91 W.

R. 90 W.

EXPLANATION

PROPOSED COAL LEASE TRACT BOUNDARY
(ELK CREEK & IRON POINT TRACTS)

PROPOSED COAL EXPLORATION
LICENSE BOUNDARY

GEOLOGIC HAZARD CLASSIFICATIONS



LANDSLIDE: Includes mostly landslides that have moved in the last few centuries, decades or years, but also may include local, quasi-stable areas and some colluvium. Unit also includes earthflows, mudflows, debris avalanches, debris fans, and slope failure complex (combinations of some or all of the above). Rockfalls may occur in the upper part of the slide, particularly where head scars occur. The lower part of the slide (toe zone) may contain areas of accumulations of rocks or contain closed depressions that hold water and are subject to hydrocompaction and swelling and shrinking of any expansive claystones present.



LANDSLIDE 1: Same as LANDSLIDE, except extensive movement has occurred on a pre-existing slide, or a new slide has formed, during last 25 years.



ROCKFALL: An area, usually on a slope greater than 50-60%, that is subject to intermittent, unpredictable falling, rolling, sliding of detached bedrock from a cliff or ledge, commonly along joint faces or joint intersections. Area of unit includes the rock accumulation zone near its base.



UNSTABLE SLOPE: An area where some type of mass-gravity movement has likely occurred in the past, and where more movement is likely, particularly when highly saturated and / or disturbed. Includes local areas of potentially unstable slopes, soil creep, landslides, debris fans, rockfalls, earthflows and mudflows.

NOTE:

(1). Geologic hazard units are mapped in accordance with State of Colorado House Bill 1041 (C.R.S. 1973, 24-65.1-101, st. seq.). For the purpose of this EIS document, some of the geologic hazard map units, as defined by the State of Colorado (EXH-12) have been combined. Geologic hazard map units described by Fehlmann (6-19-91) were also noted and compared.

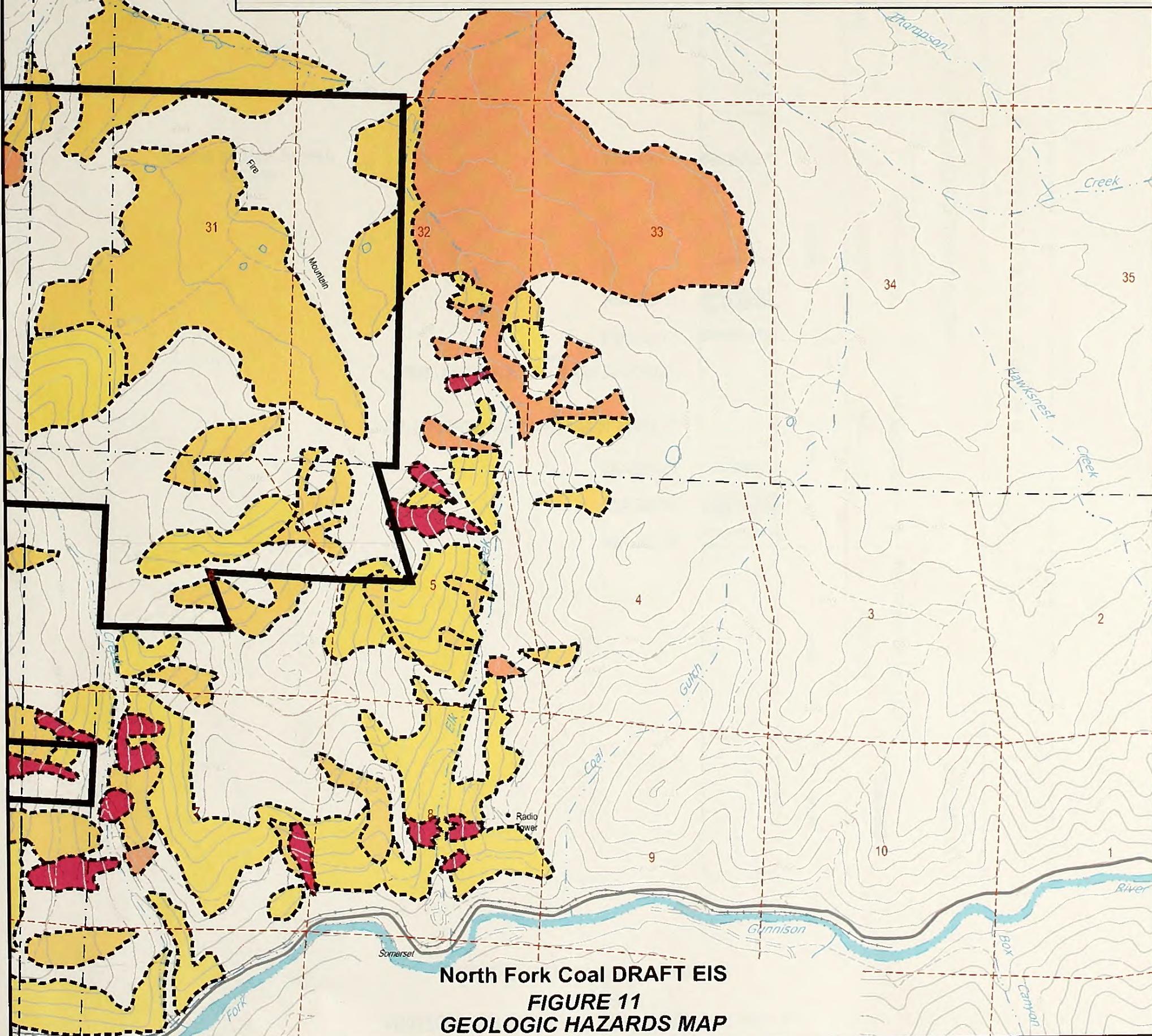
(2). MAPPING methods: The map units were mapped on portions of the Bowie, Somerset, and Electric Mountain USGS 7 1/2 - minute Quadrangle Maps. Map unit boundaries, which should be considered as transitional to adjacent units, were drawn using stereographic pairs of aerial photographs dated 7-1-89 and 10-6-97. These units were also mapped using the author's knowledge from previous mapping of the area (Dunrud, C.R., 1989).

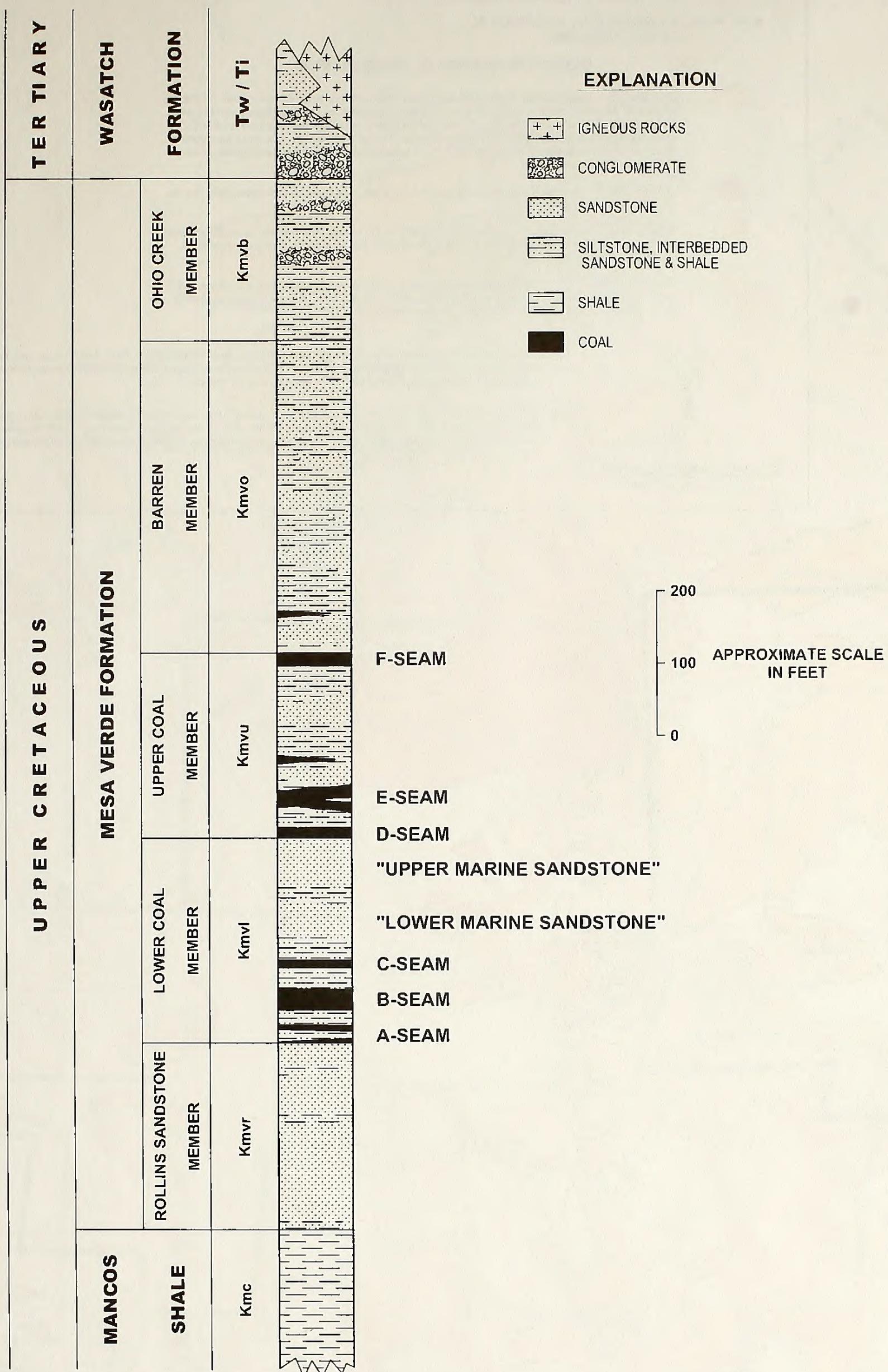


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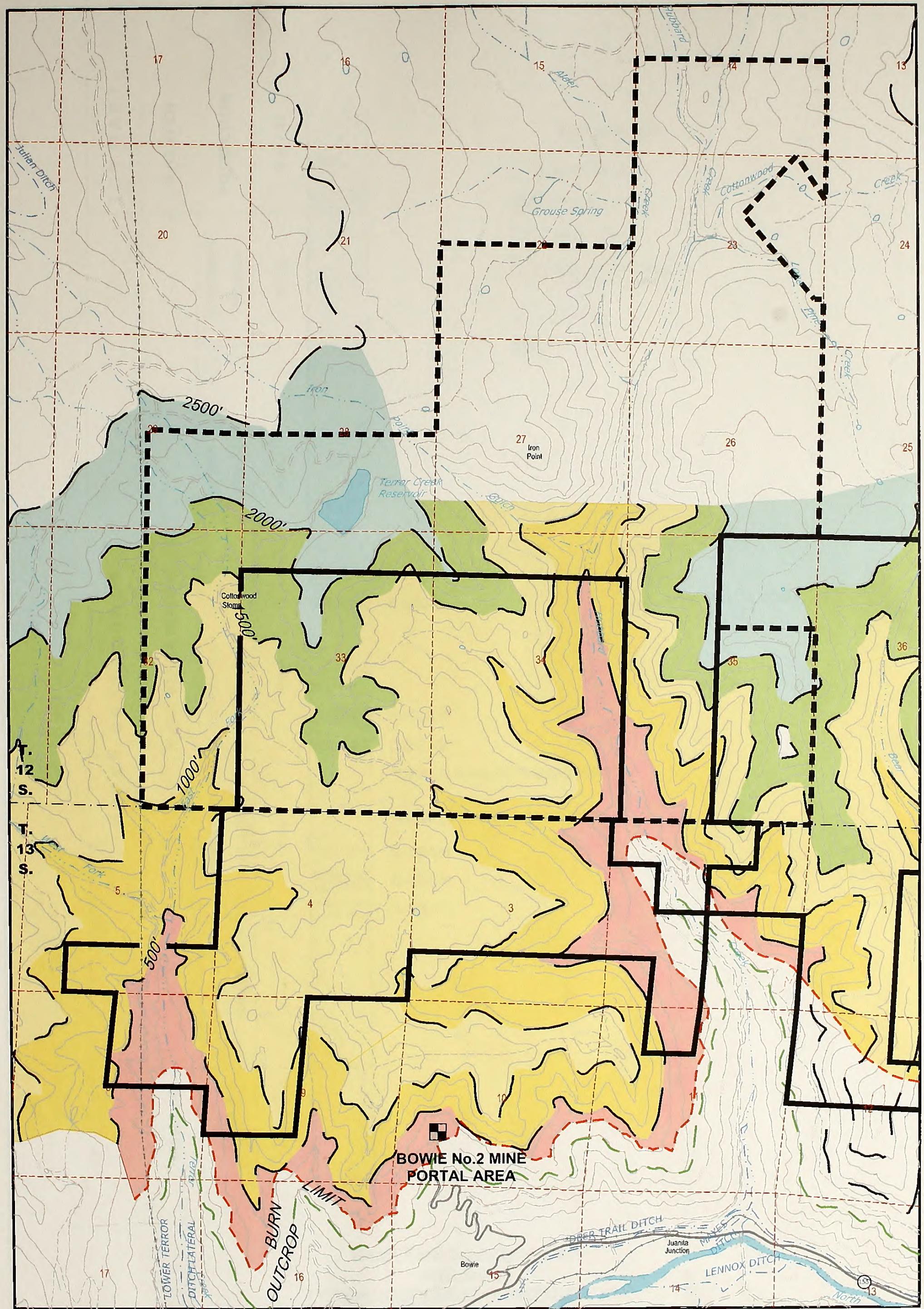
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North Fork Coal DRAFT EIS
FIGURE 12
TYPICAL GEOLOGIC CROSS-SECTION



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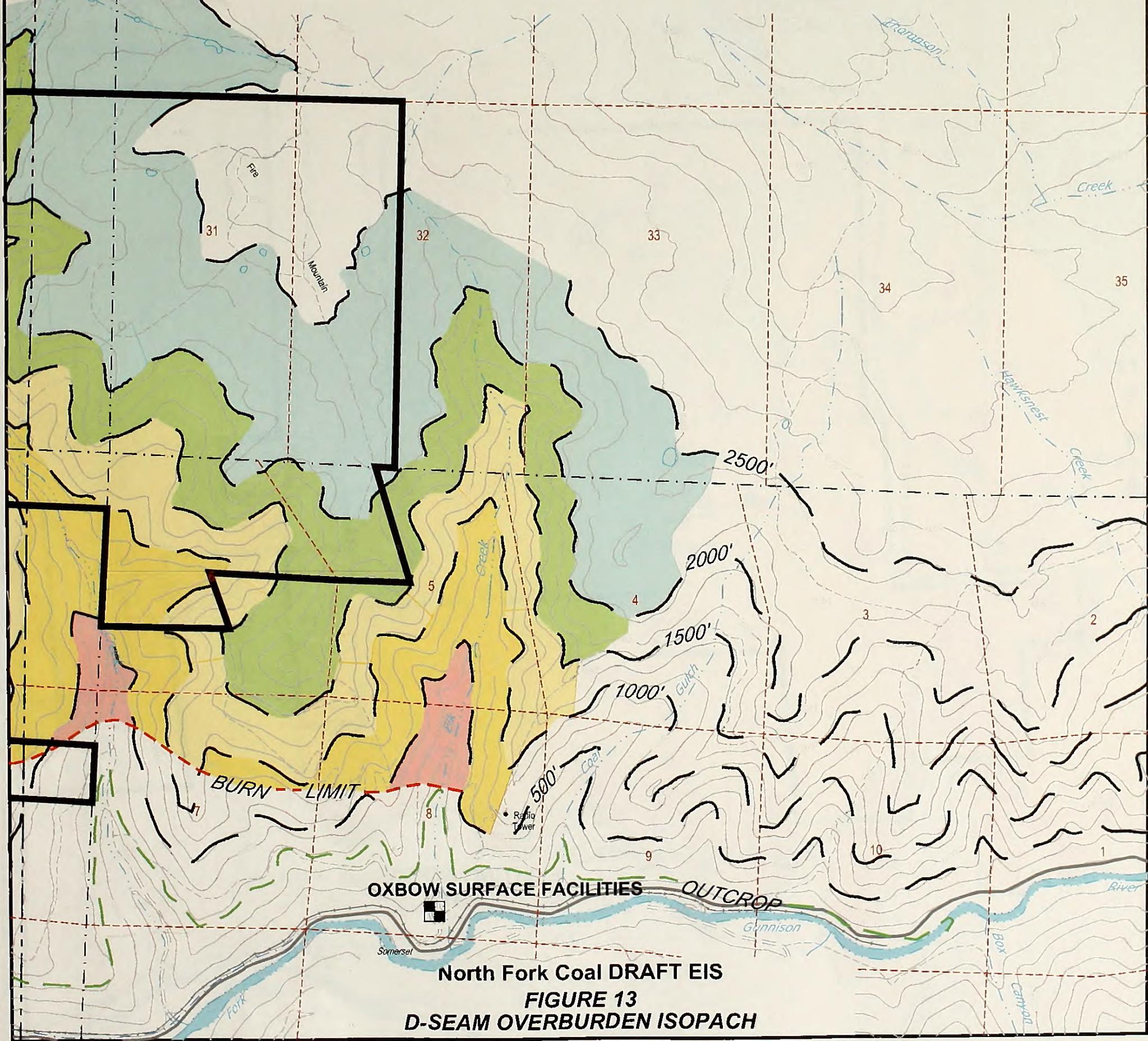
R. 90 W.

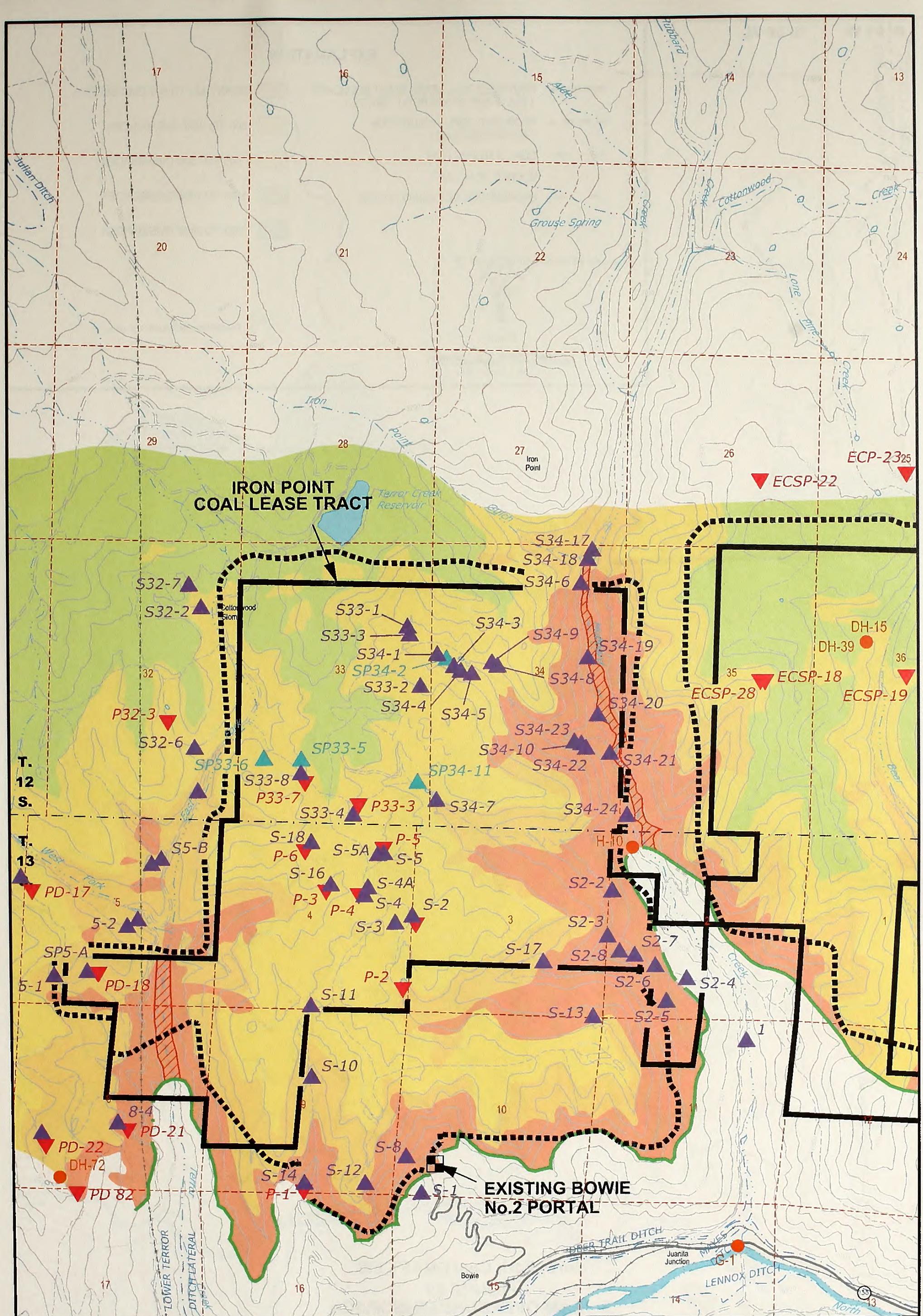
EXPLANATION

- PROPOSED COAL LEASE TRACT BOUNDARY
(ELK CREEK & IRON POINT TRACTS)
- - - PROPOSED COAL EXPLORATION
LICENSE BOUNDARY
- - - COAL OUTCROP LIMIT
- - - BURNED COAL LIMIT
- - - OVERBURDEN ISOPACH CONTOUR
- BURN LIMIT TO 500' OVERBURDEN
- 500' TO 1000' OVERBURDEN
- 1000' TO 1500' OVERBURDEN
- 1500' TO 2000' OVERBURDEN
- 2000' TO 2500' OVERBURDEN

NOTE:

SCALE
2000' 0 2000'
CONTOUR INTERVAL 200FT





R. 91 W. R. 90 W.
DELTA COUNTY GUNNISON COUNTY

EXPLANATION

- PROPOSED COAL LEASE TRACT BOUNDARY (ELK CREEK & IRON POINT TRACTS)
- D-SEAM BURN LIMIT
- AREA OF POTENTIAL SUBSIDENCE (BASED ON MINING THE ENTIRE LEASE COAL RESOURCE - USING A 21 DEGREE ANGLE OF DRAW)
- GROUND WATER WELL
- SPRING
- SPRING WITH POND
- STOCK POND

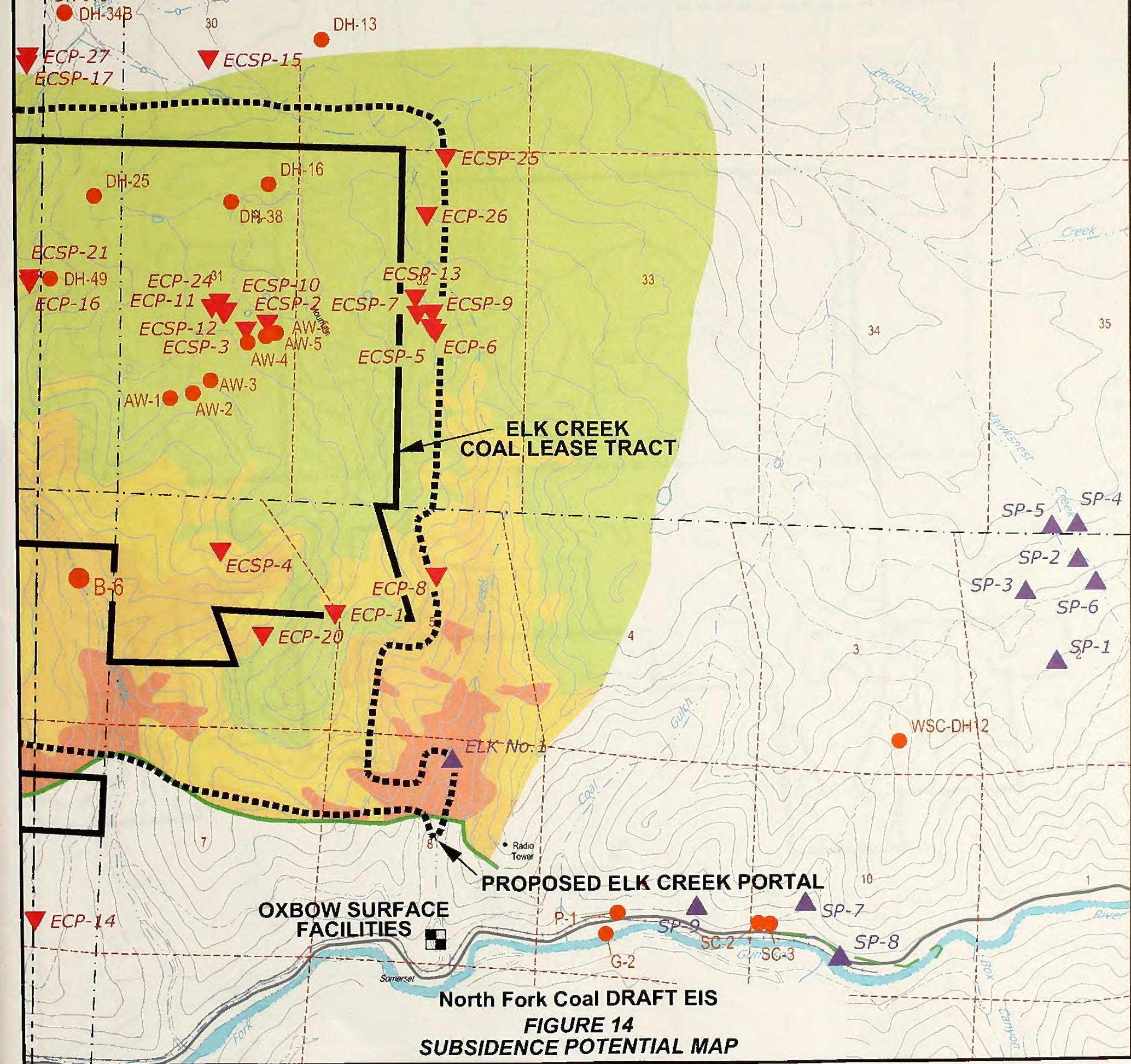
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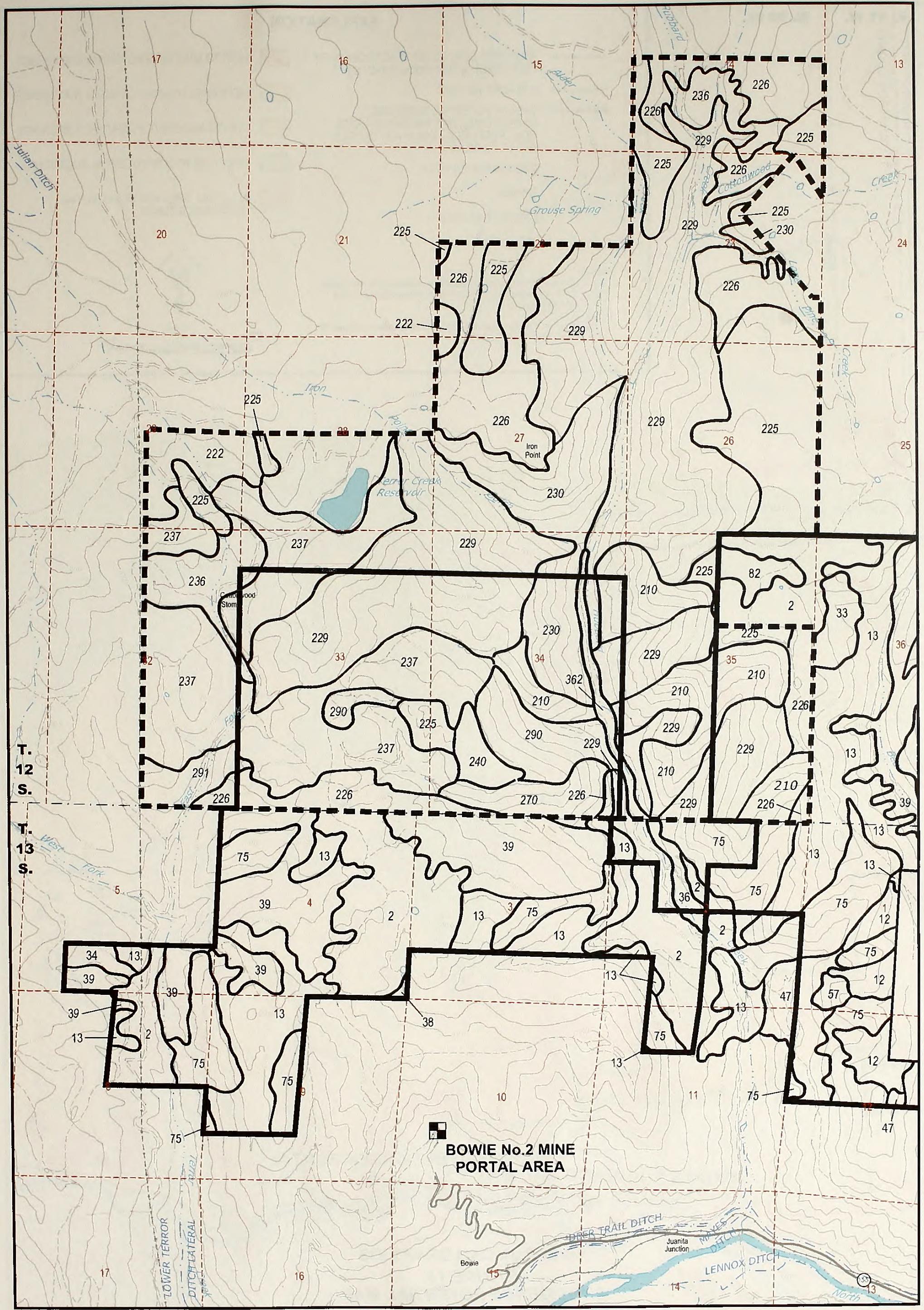
(1). This map merely illustrates the potential for subsidence. Possible impacts of such subsidence to individual resource areas are discussed in the sections of Chapter 3.

(2). Locations of wells, springs, and stock ponds are also shown on Figure 19, Groundwater Hydrology Map.



SCALE
2000' 0 2000'





R. 91 W.

R. 90 W.

DELA COUNTY
GUNNISON COUNTY

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Hall Reservoir

19

Bear Creek

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EXPLANATION

PROPOSED COAL LEASE TRACT BOUNDARY
(ELK CREEK & IRON POINT TRACTS)PROPOSED COAL EXPLORATION
LICENSE BOUNDARY

13 SOIL TYPE LOCATION

NRCS 1981 SOIL UNIT KEY

UNIT
NUMBER

2 Absarokee - Work loams, 6 to 25 percent slopes
12 Beenom - Absarokee loams, 5 to 20 percent slopes
13 Beenom - Absarokee association, 20 to 60 percent slopes
18 Bulkley clay loam, 12 to 25 percent slopes
33 Delson stony loam, 3 to 20 percent slopes
34 Delson very stony loam, 20 to 60 percent slopes
36 Fluvents, flooded
38 Fughes loam, 15 to 25 percent slopes
39 Fughes loam, 25 to 65 percent slopes
41 Fughes - Curecanti stony loams, 10 to 40 percent slopes
47 Kech - Rock outcrop complex, 10 to 40 percent slopes
67 Rock outcrop
75 Torriorthents - Rock outcrop, sandstone complex
82 Work loam, 6 to 12 percent slopes

UNIT
NUMBER

200 Rock outcrop
207 Boralfs and Borolls, clayey, slumped, 5 to 65 percent slopes
210 Torriorthents, Warm - Rock outcrop complex, 35 to 90 percent slopes
213 Hayrack - Muggins - Nutras complex, 40 to 65 percent slopes
222 Wetopa - Wesdy complex, 5 to 65 percent slopes
225 Herm - Fughes complex, 5 to 25 percent slopes
226 Herm - Fughes - Kolob family complex, 25 to 40 percent slopes
229 Cryocept - Cryoborolls - Rubble land complex, 15 to 90 percent slopes
230 Haploborolls - Ustocrepts - Rock outcrop complex, 40 to 99 percent slopes
236 Shawa - Sandia family - Kolob family complex, 5 - 40 percent slopes
237 Shawa - Sandia family - Kolob family complex, 40 to 65 percent slopes
240 Coberly - Falcon, dry complex, 0 - 15 percent slopes
290 Godding - Kolob family - Delson complex, 5 to 25 percent slopes, very stony
291 Godding - Kolob family - Delson complex, 25 to 65 percent slopes, extremely stony
293 Leroux - Seitz complex, 5 to 40 percent slopes
302 Cumulic Haploborolls, 1 to 3 percent slopes
325 Broad Canyon - Scout family complex, 25 to 65 percent slopes
360 Nutras - Tellura complex, 5 to 40 percent slopes



SCALE

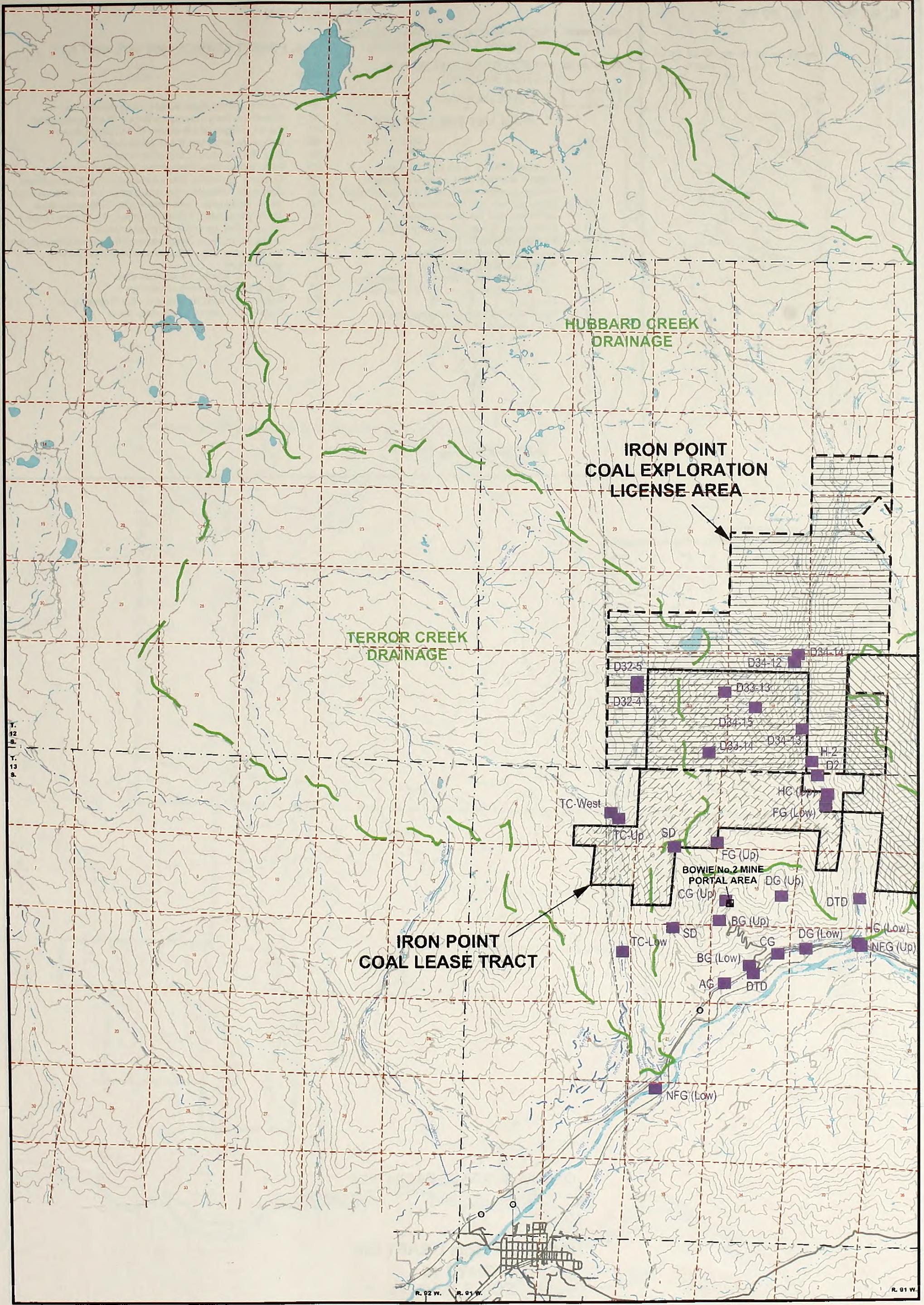
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OXBOW SURFACE FACILITIES

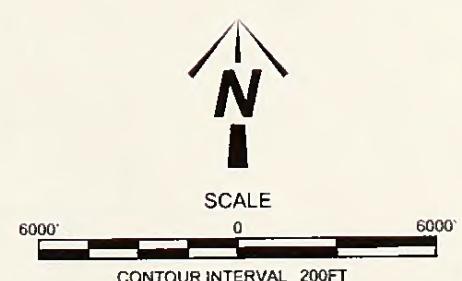
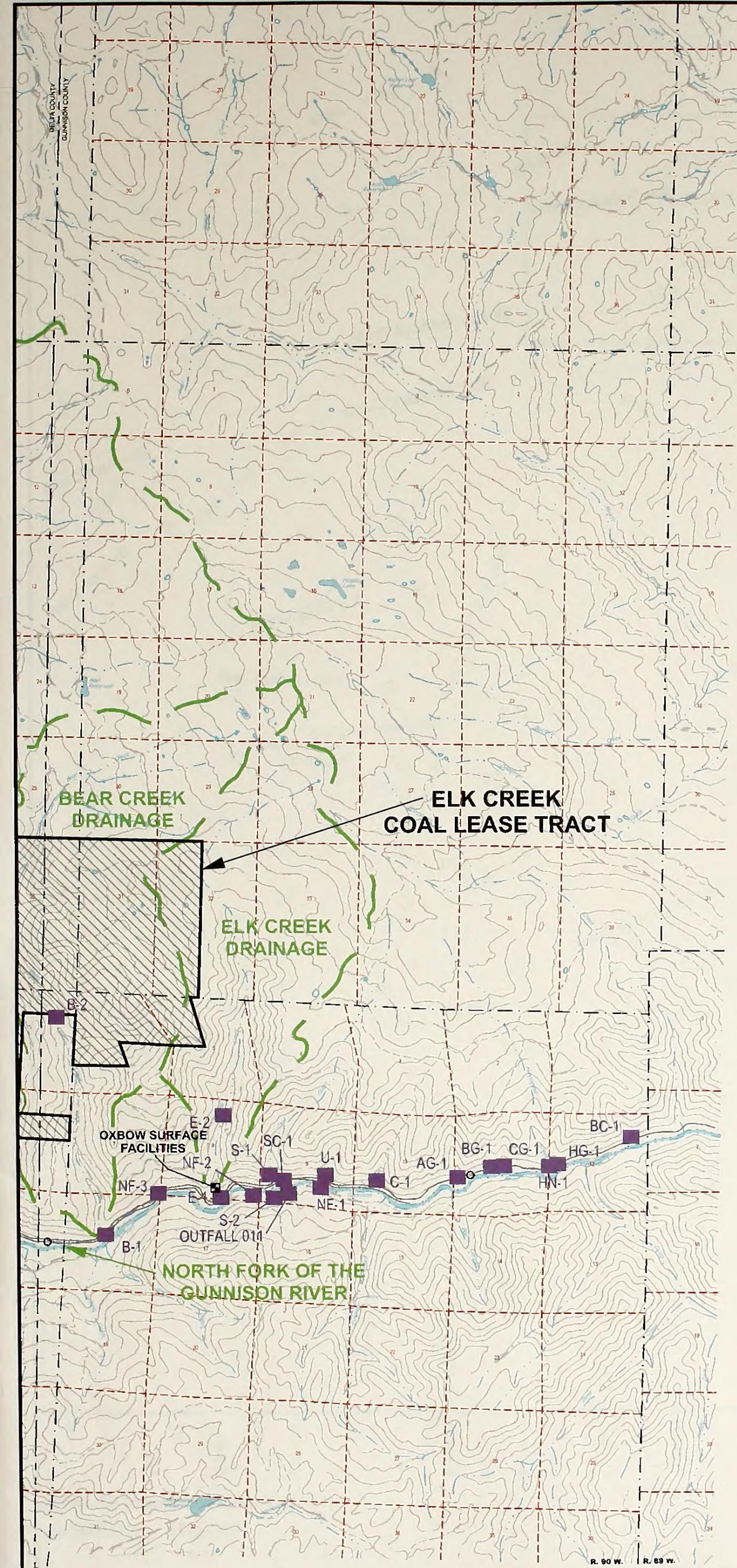
North Fork Coal DRAFT EIS

FIGURE 15
SOILS MAP



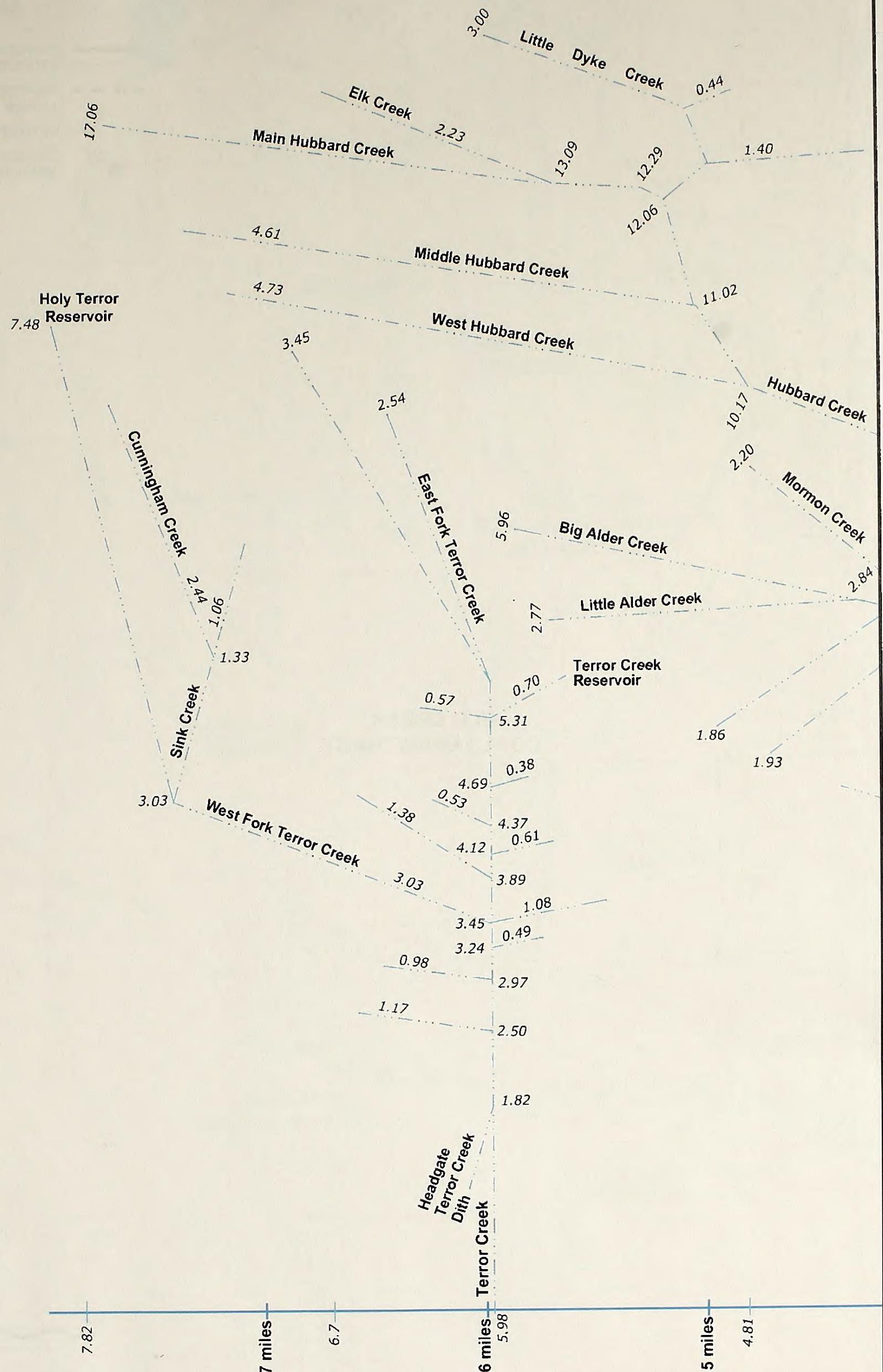
EXPLANATION

- PROPOSED COAL LEASE TRACT BOUNDARY (ELK CREEK & IRON POINT TRACTS)
- PROPOSED COAL EXPLORATION LICENSE BOUNDARY
- WATERSHED BOUNDARY
- DG SURFACE WATER MONITORING LOCATION



North Fork Coal DRAFT EIS

FIGURE 16
REGIONAL HYDROLOGY MAP

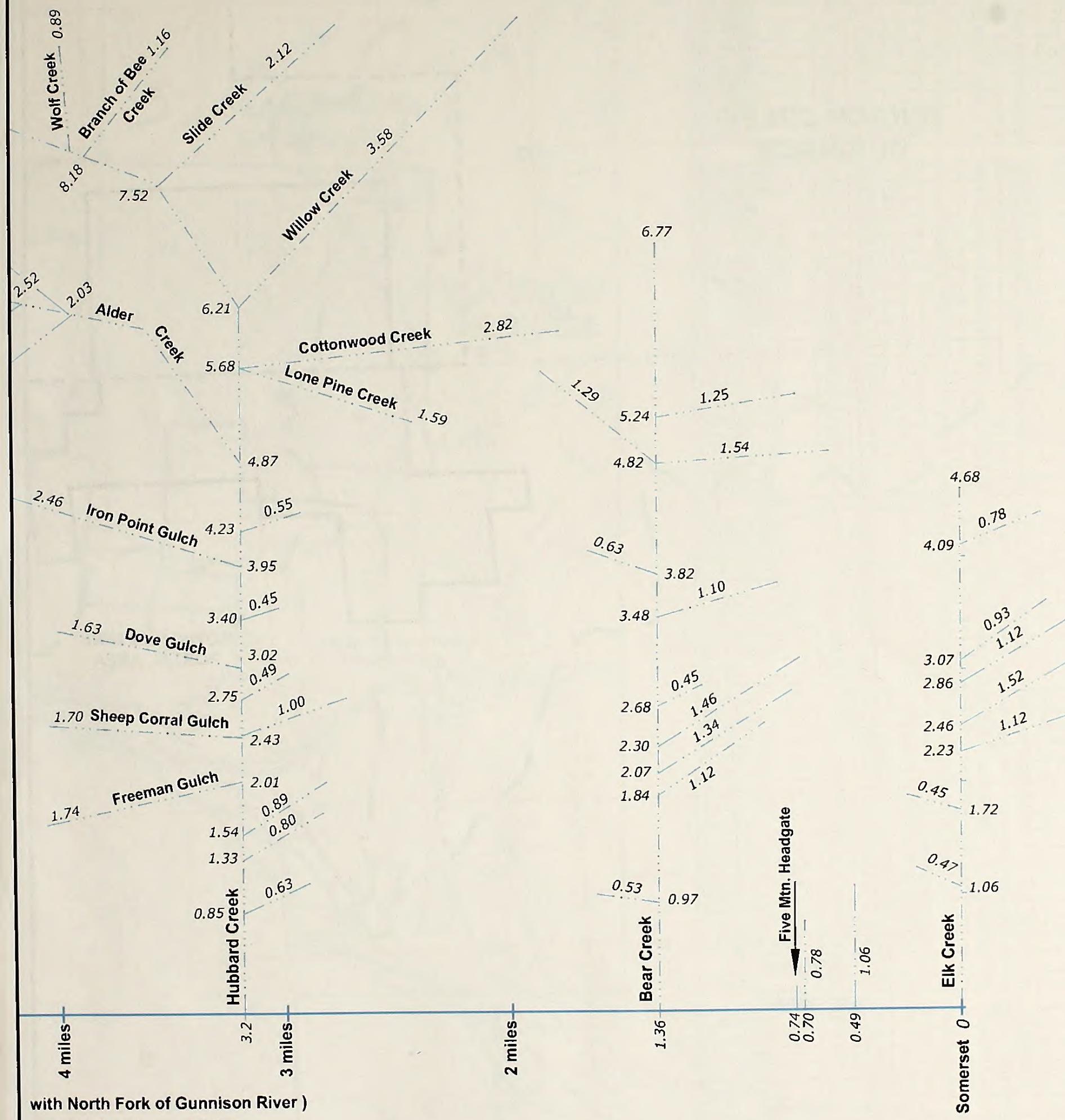


(Miles from Confluence of Elk Creek
NORTH FORK

EXPLANATION

DISTANCE FROM CONFLUENCE IN MILES

Horizontal Scale: 2" = 1 mile
Vertical Scale: 1" = 1 mile



North Fork Coal DRAFT EIS
FIGURE 17
REGIONAL STREAM NETWORK

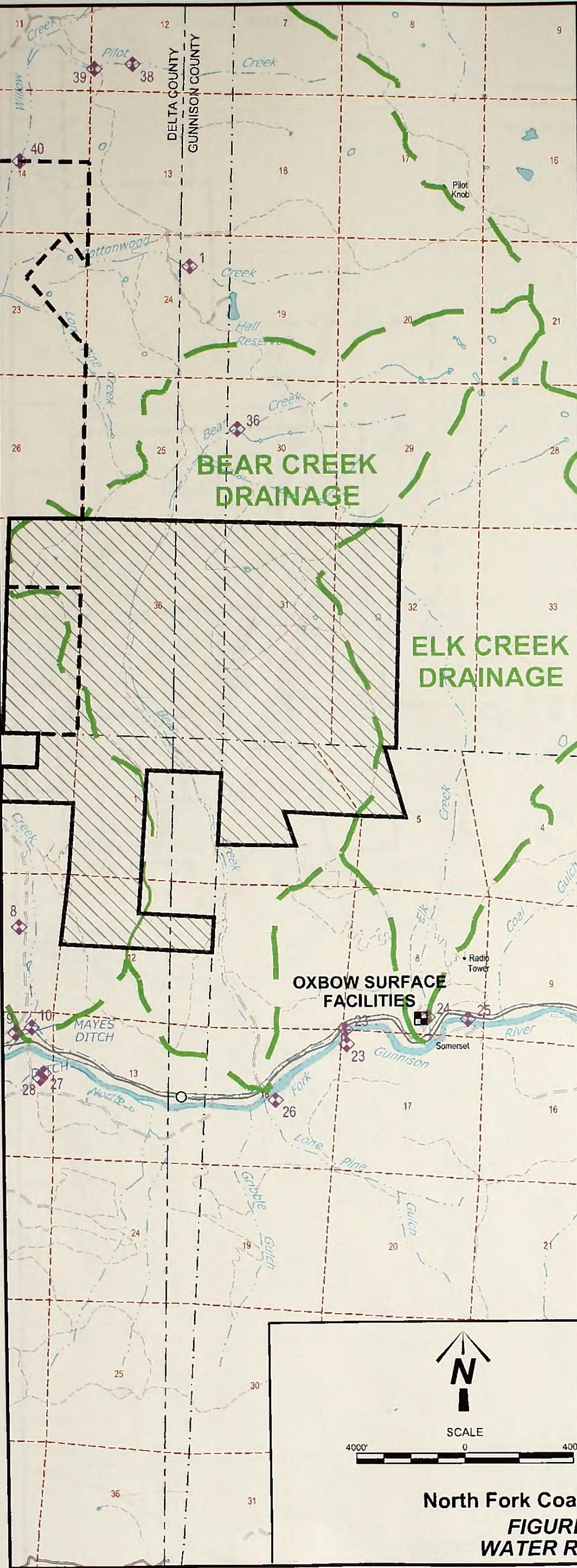
HUBBARD CREEK DRAINAGE

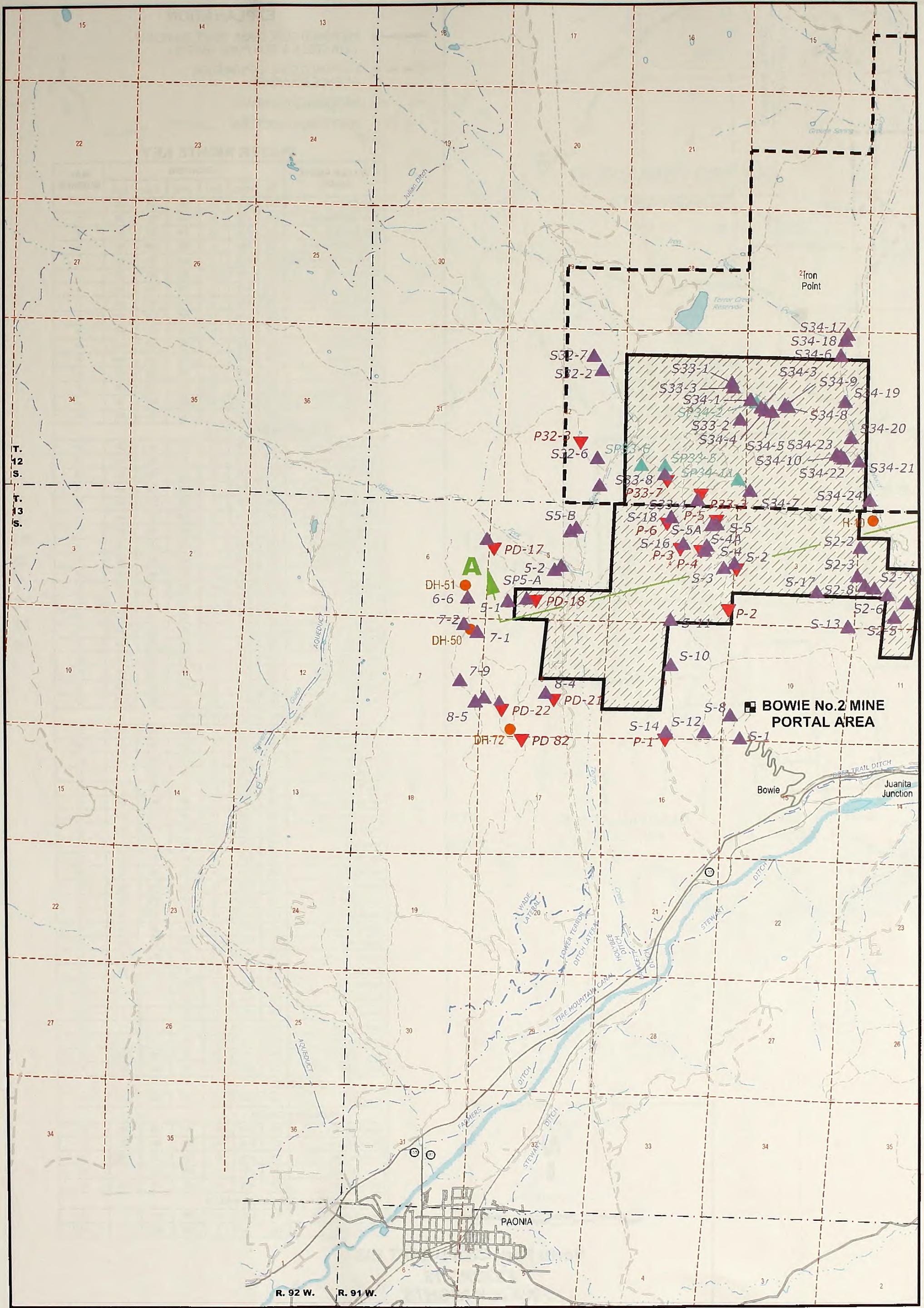
TERROR CREEK DRAINAGE

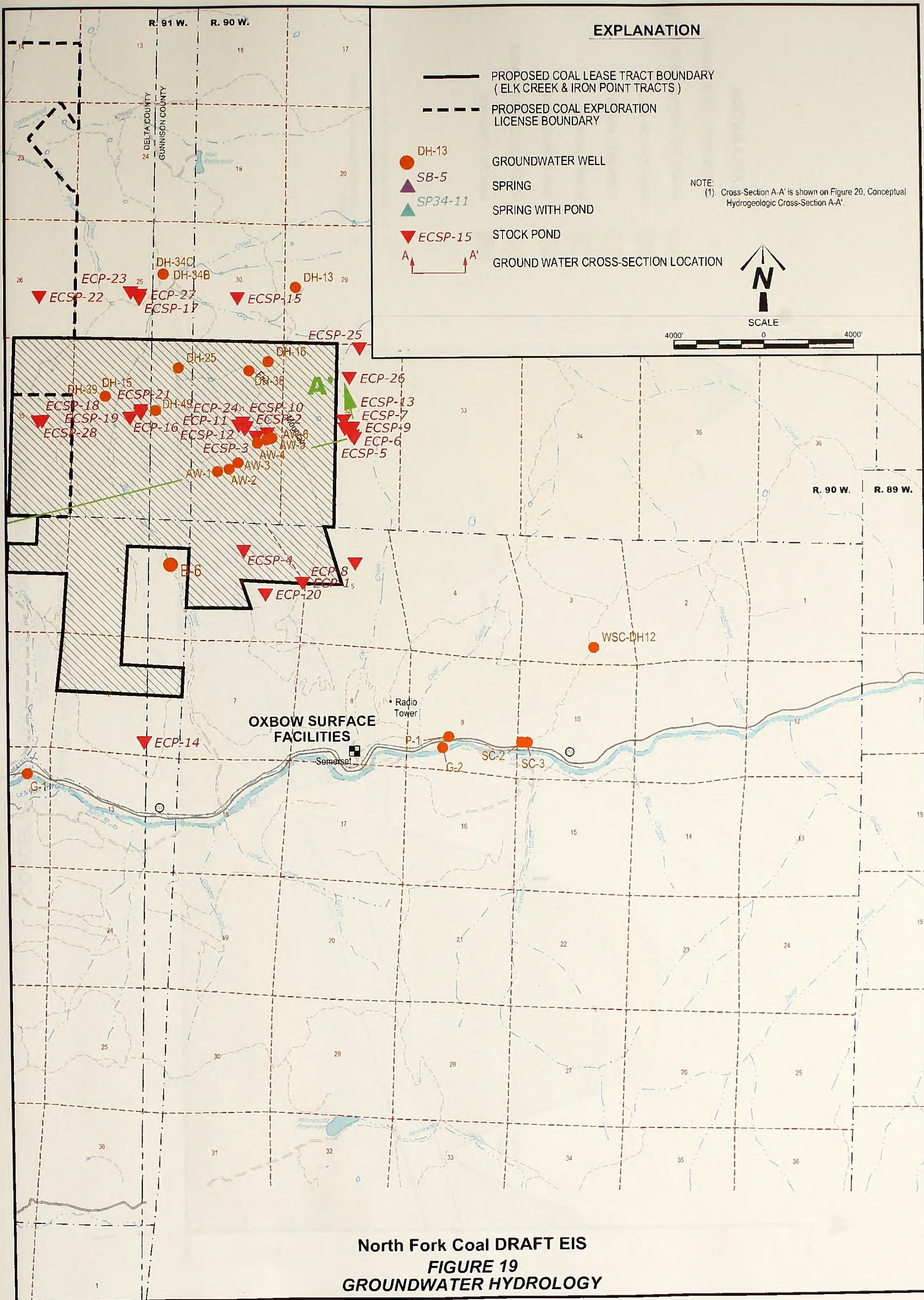
T 12 S

BOWIE No.2 MINE PORTAL AREA

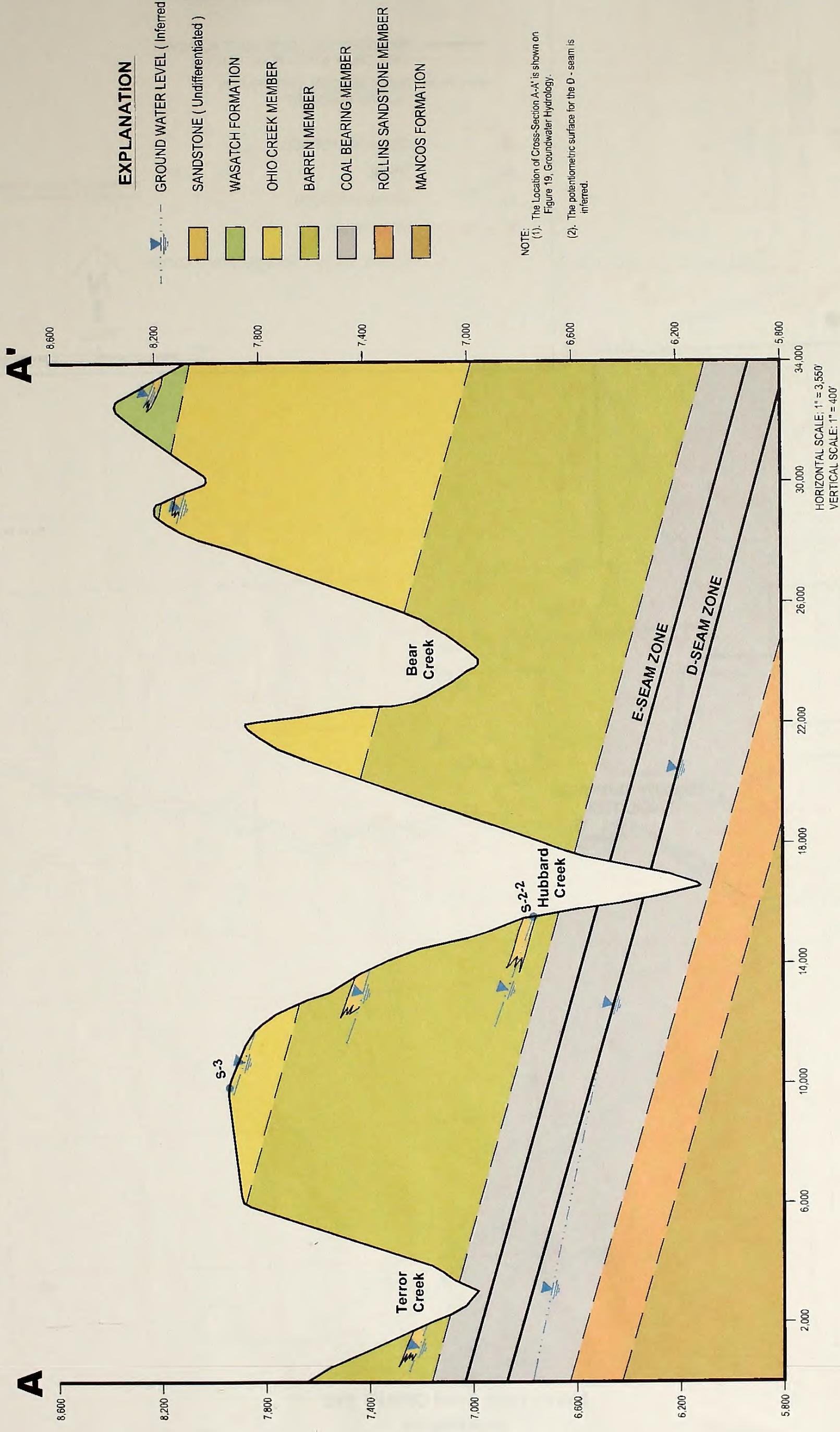
R. 92 W. | R. 91 W.



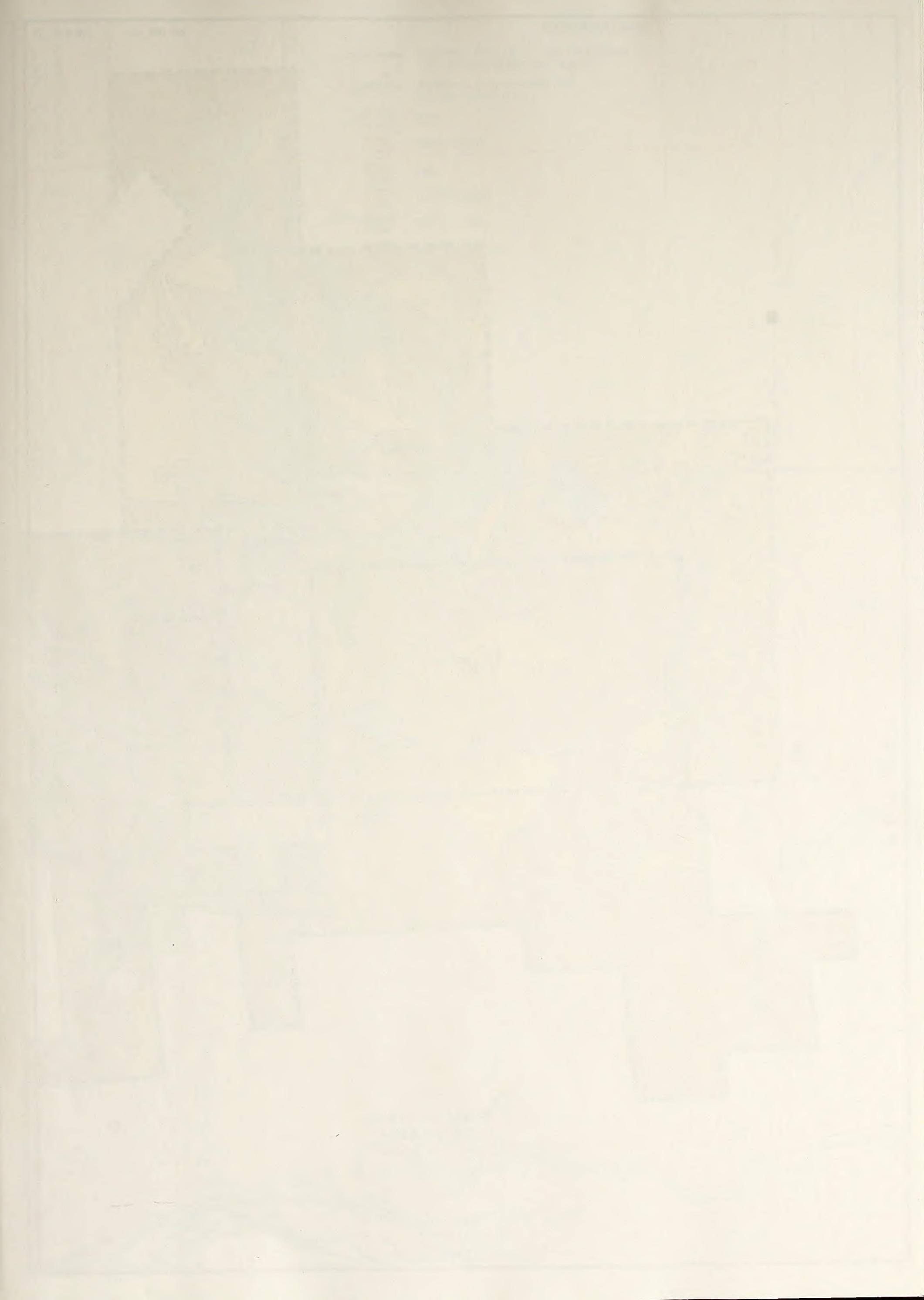


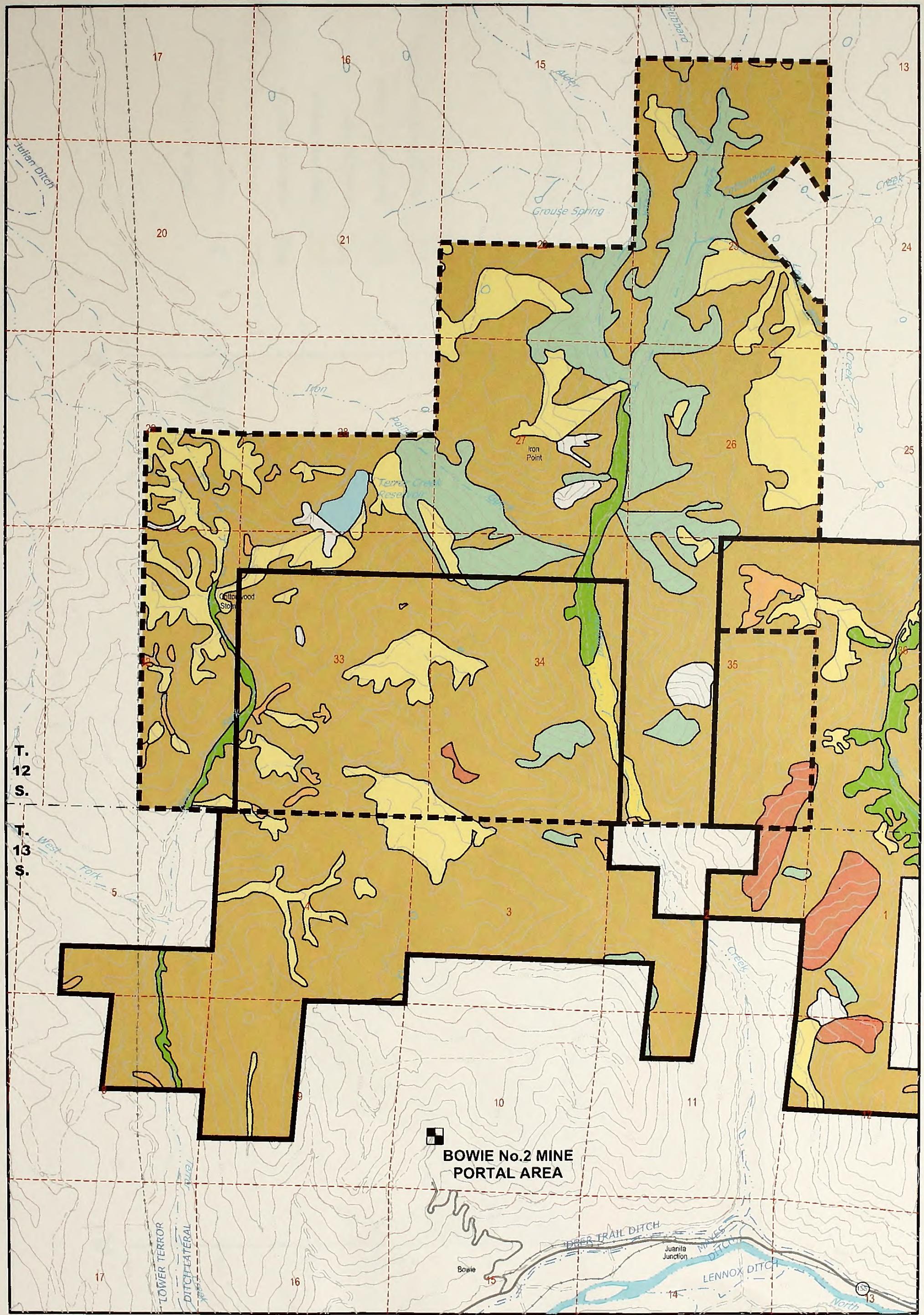


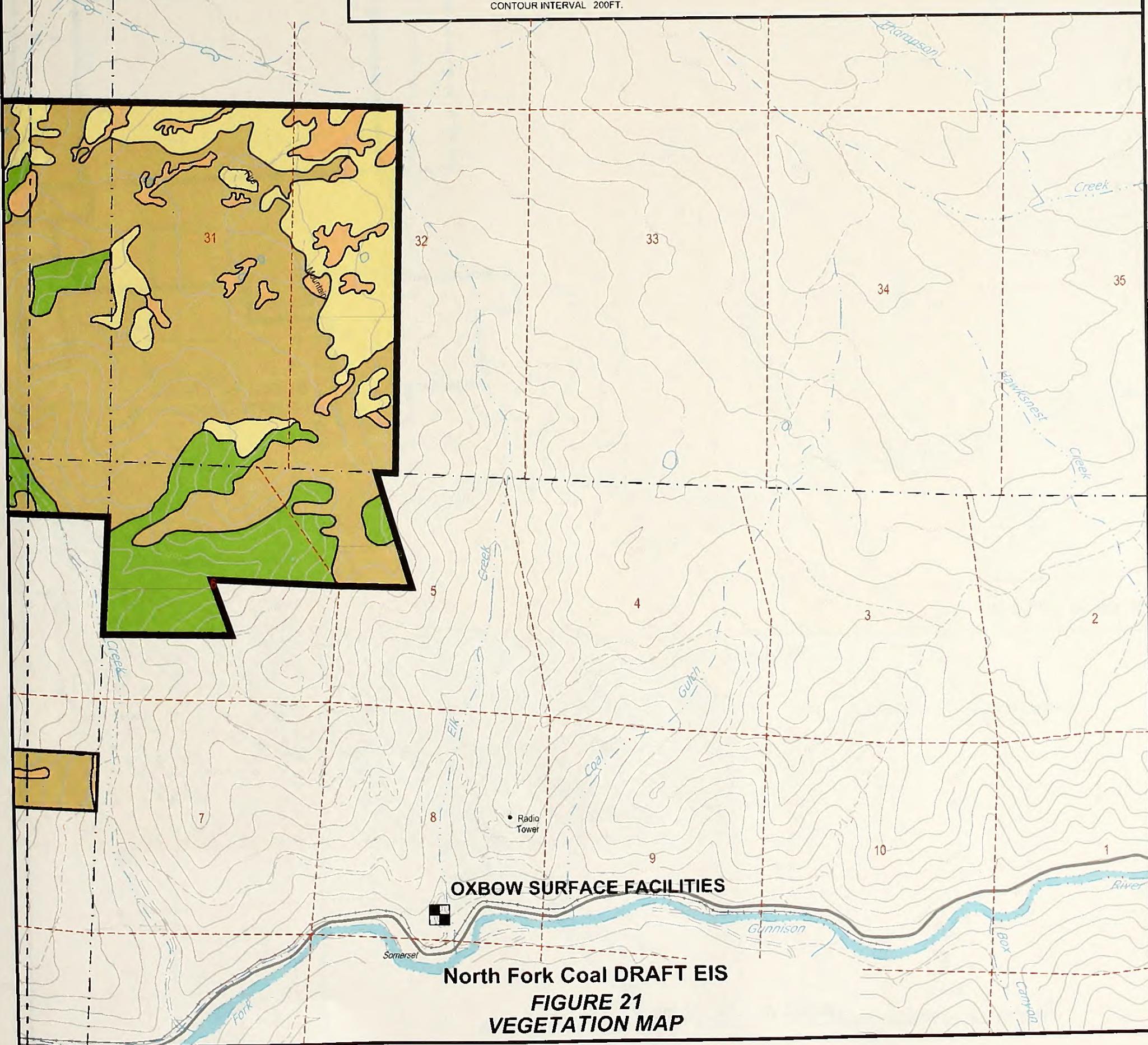
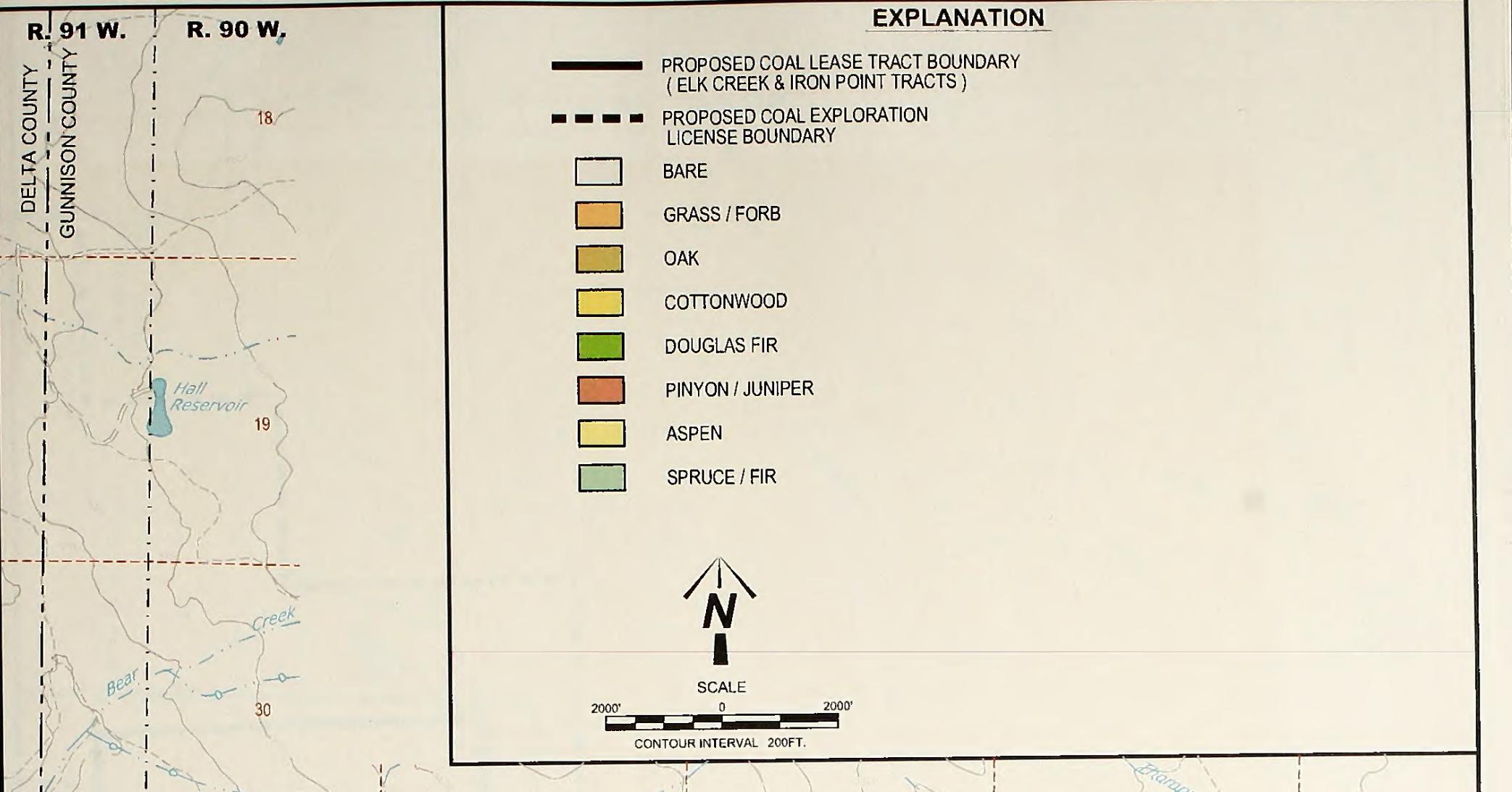
North Fork Coal DRAFT EIS
FIGURE 19
GROUNDWATER HYDROLOGY

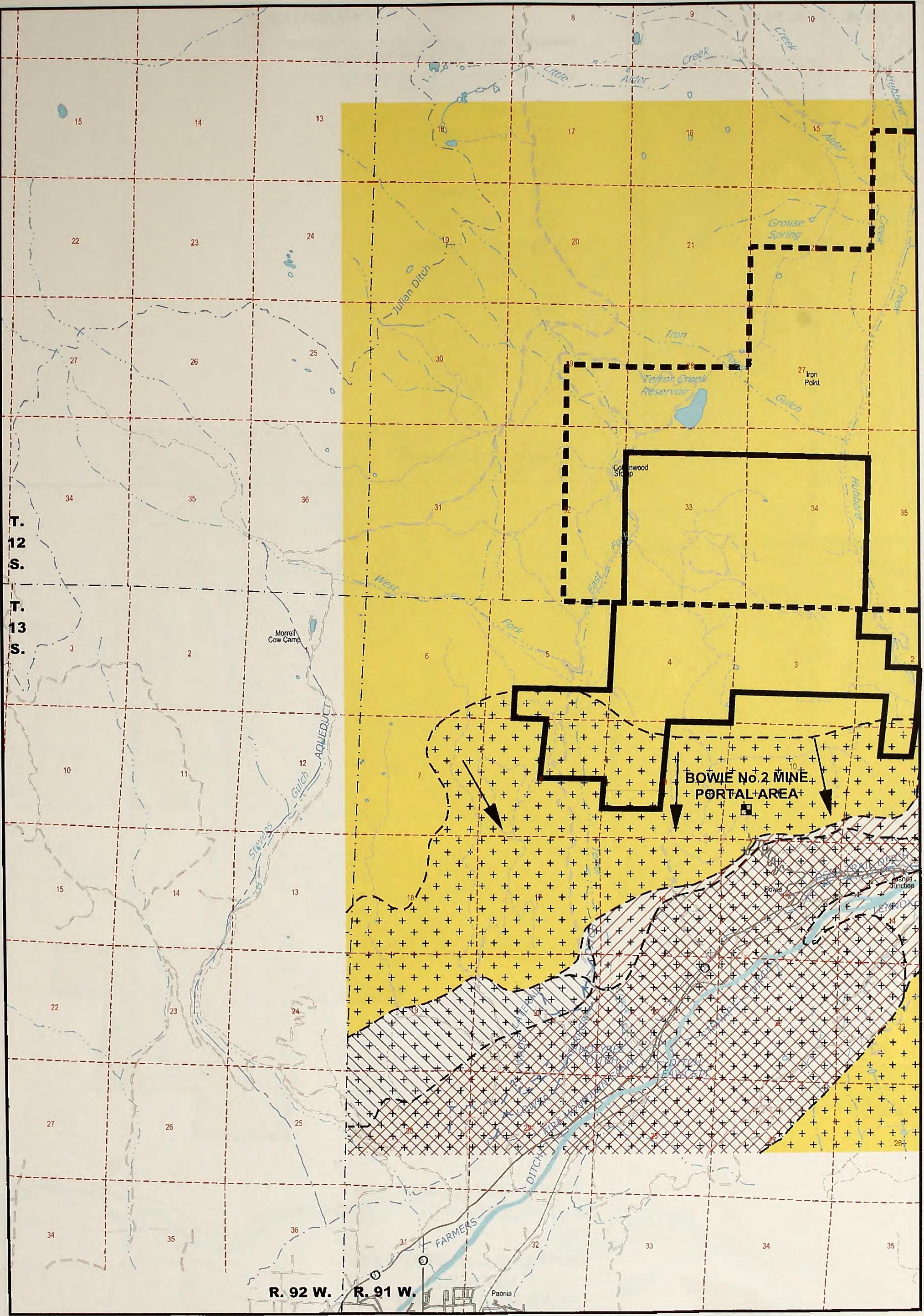


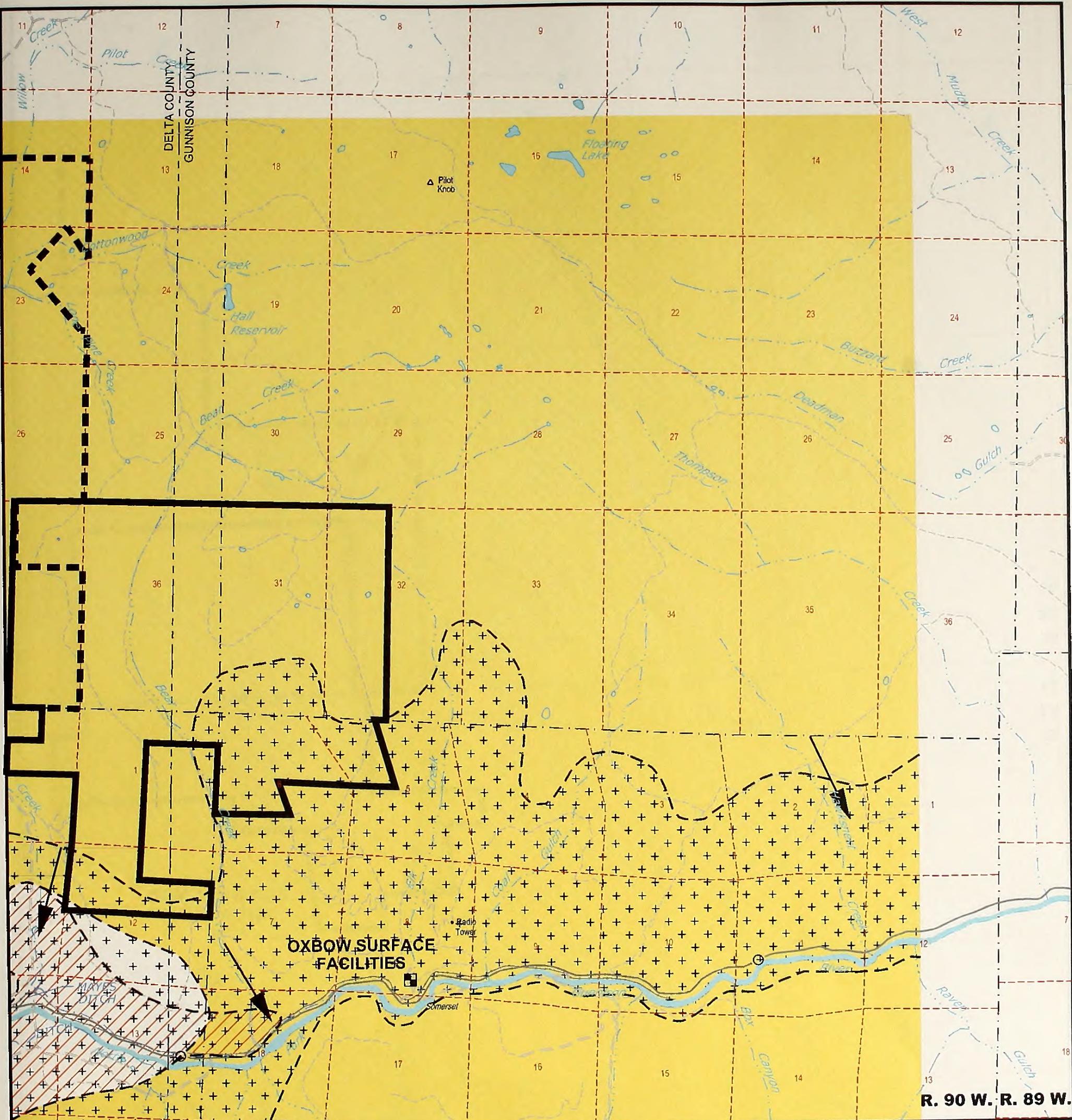
North Fork Coal DRAFT EIS
FIGURE 20
CONCEPTUAL HYDROGEOLOGIC CROSS-SECTION A-A'











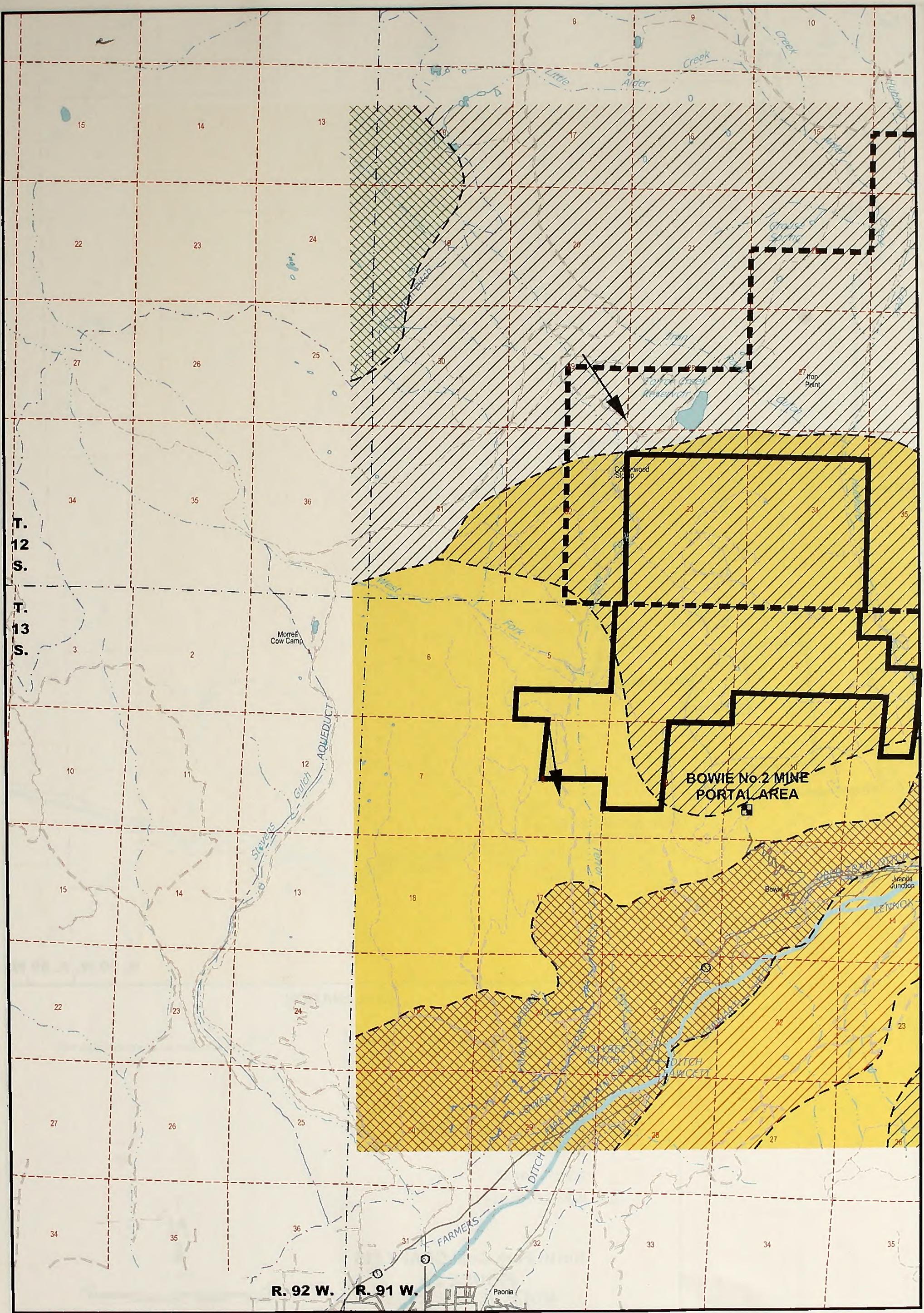
EXPLANATION

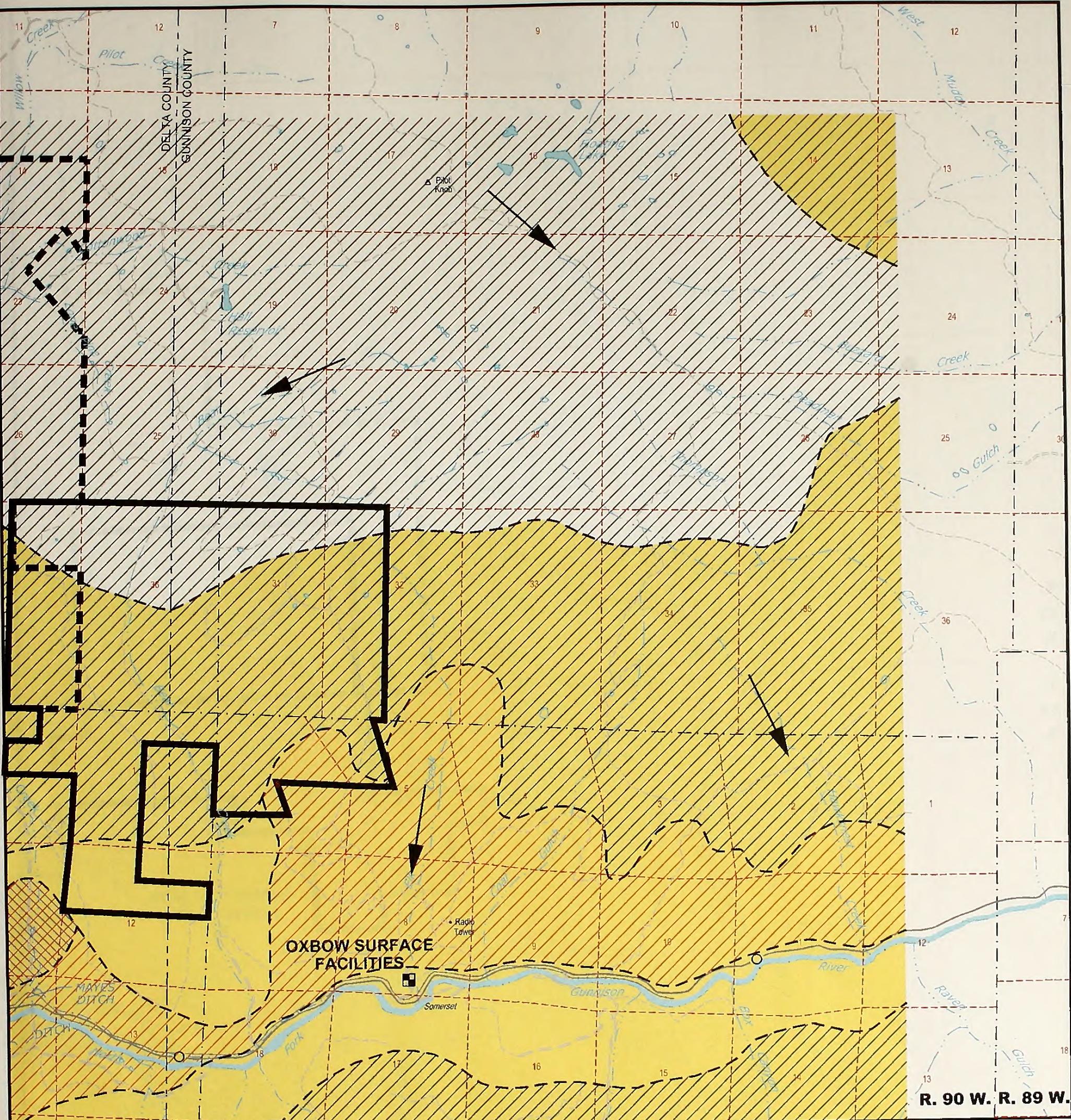
- PROPOSED COAL LEASE TRACT BOUNDARY (ELK CREEK & IRON POINT TRACTS)
- - - PROPOSED COAL EXPLORATION LICENSE BOUNDARY
- SEVERE WINTER RANGE
- ▨ WINTER CONCENTRATION AREAS
- ▨ WINTER RANGE
- SUMMER RANGE
- MIGRATION PATTERN

NOTE:
(1) Source: Colorado Division of Wildlife (Update 1995).

North Fork Coal DRAFT EIS
FIGURE 22
MULE DEER RANGE

4000 0 4000
SCALE





EXPLANATION

- PROPOSED COAL LEASE TRACT BOUNDARY (ELK CREEK & IRON POINT TRACTS)
- - - PROPOSED COAL EXPLORATION LICENSE BOUNDARY
- SEVERE WINTER RANGE
- WINTER CONCENTRATION AREAS
- WINTER RANGE
- PRODUCTION AREA
- SUMMER RANGE
- MIGRATION PATTERN

NOTE:
(1). Source: Colorado Division of Wildlife (Update 1995).

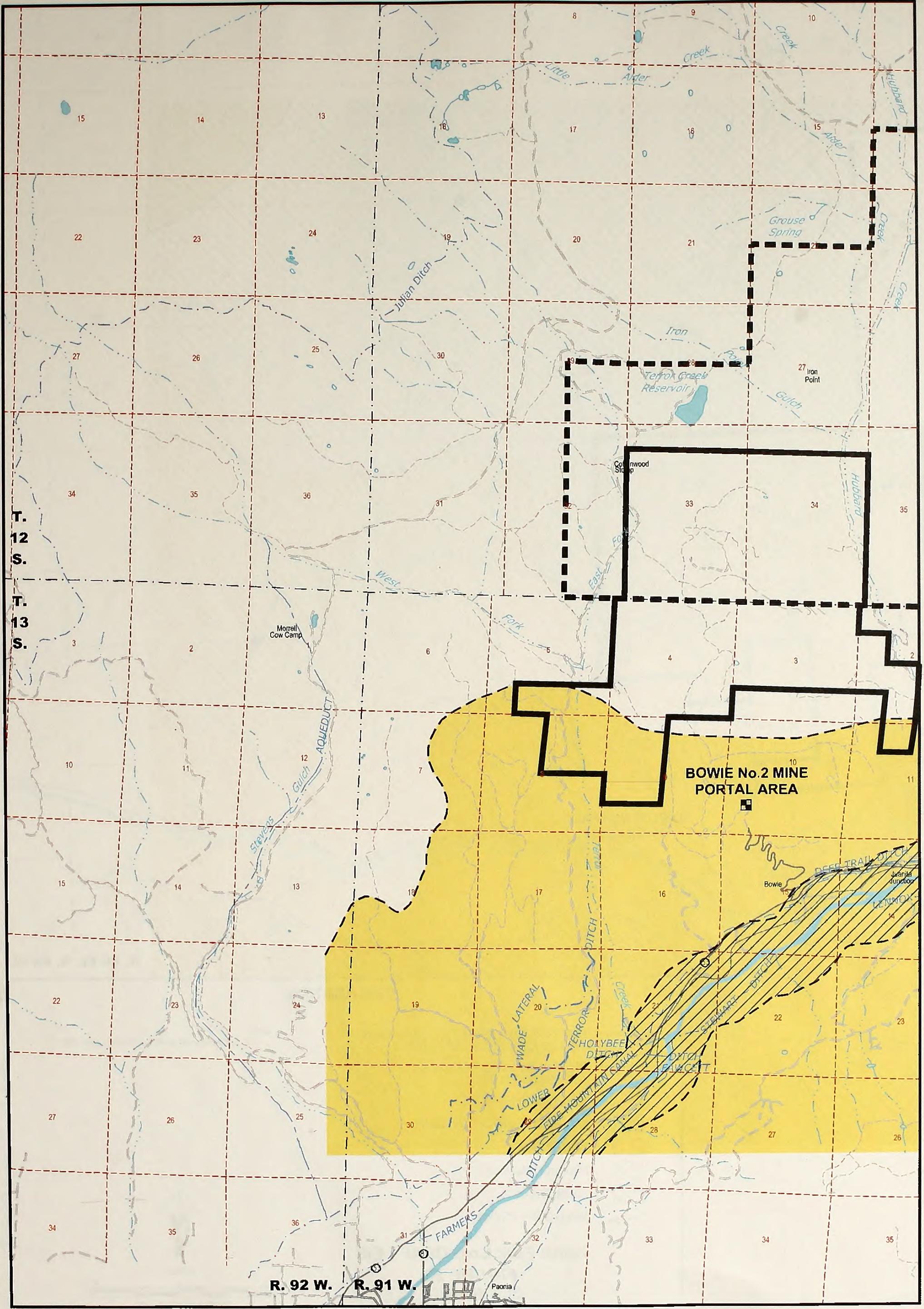
North Fork Coal DRAFT EIS

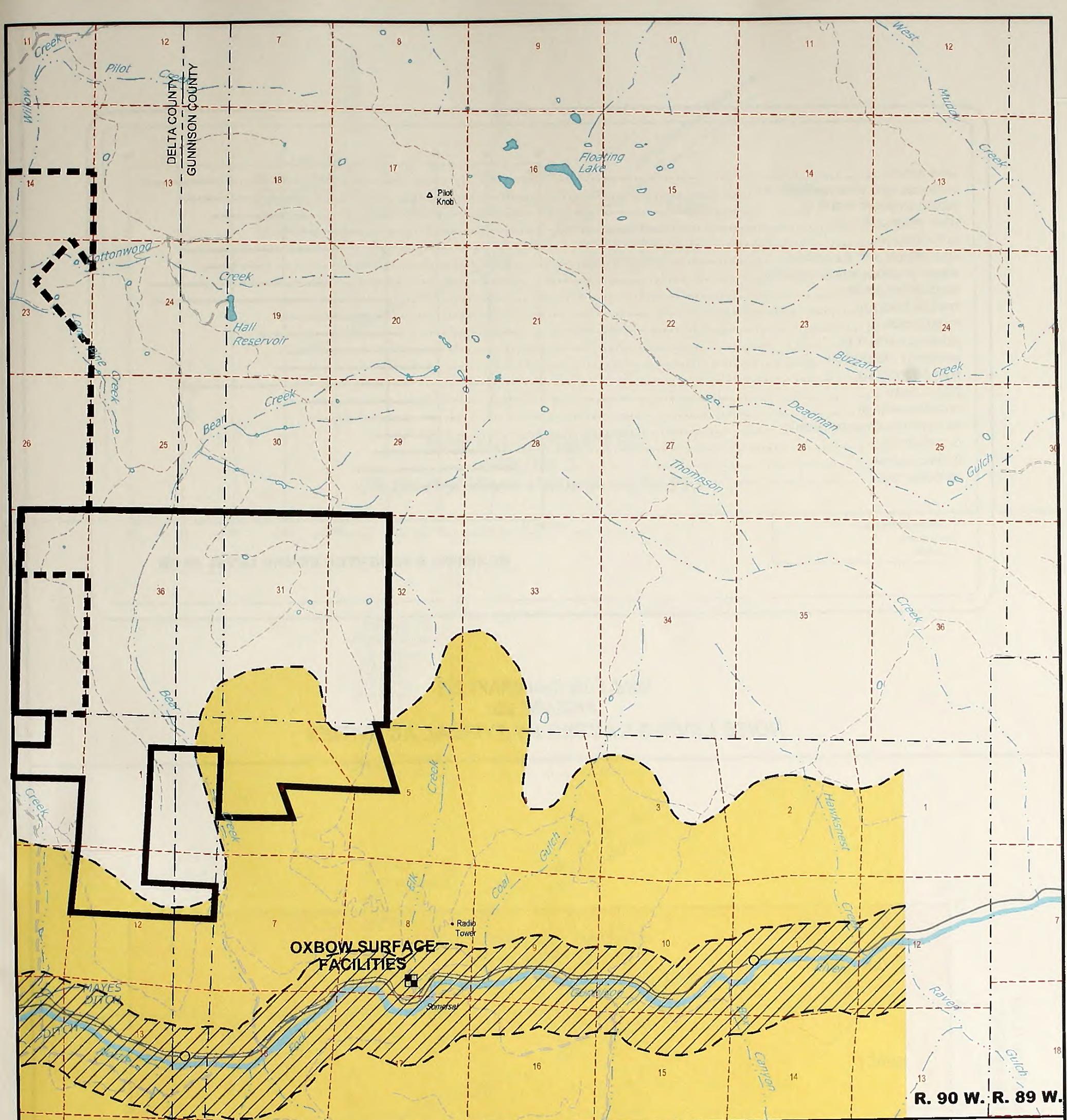
FIGURE 23
ELK RANGE



SCALE

4000 0 4000
CONTOUR INTERVAL 20FT



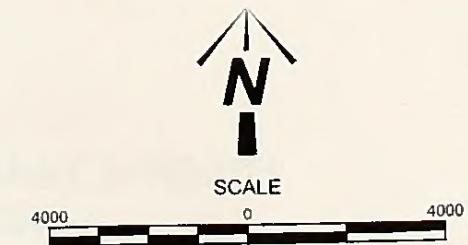


EXPLANATION

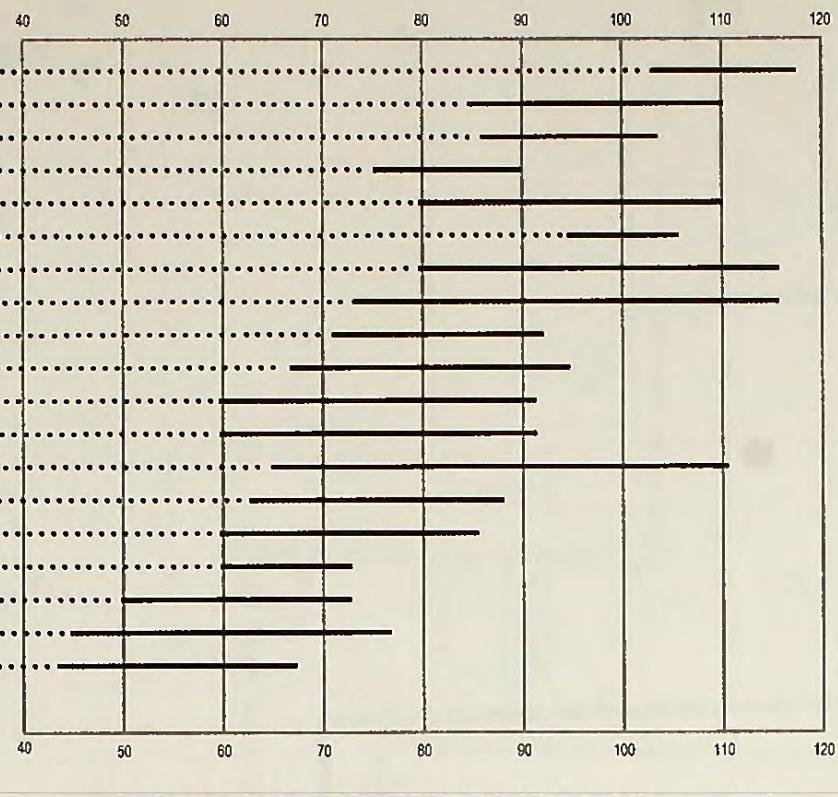
- PROPOSED COAL LEASE TRACT BOUNDARY (ELK CREEK & IRON POINT TRACTS)
- PROPOSED COAL EXPLORATION LICENSE BOUNDARY
- WINTER CONCENTRATION AREA
- WINTER RANGE

NOTE:
(1). Source: Colorado Division of Wildlife (Update 1995).

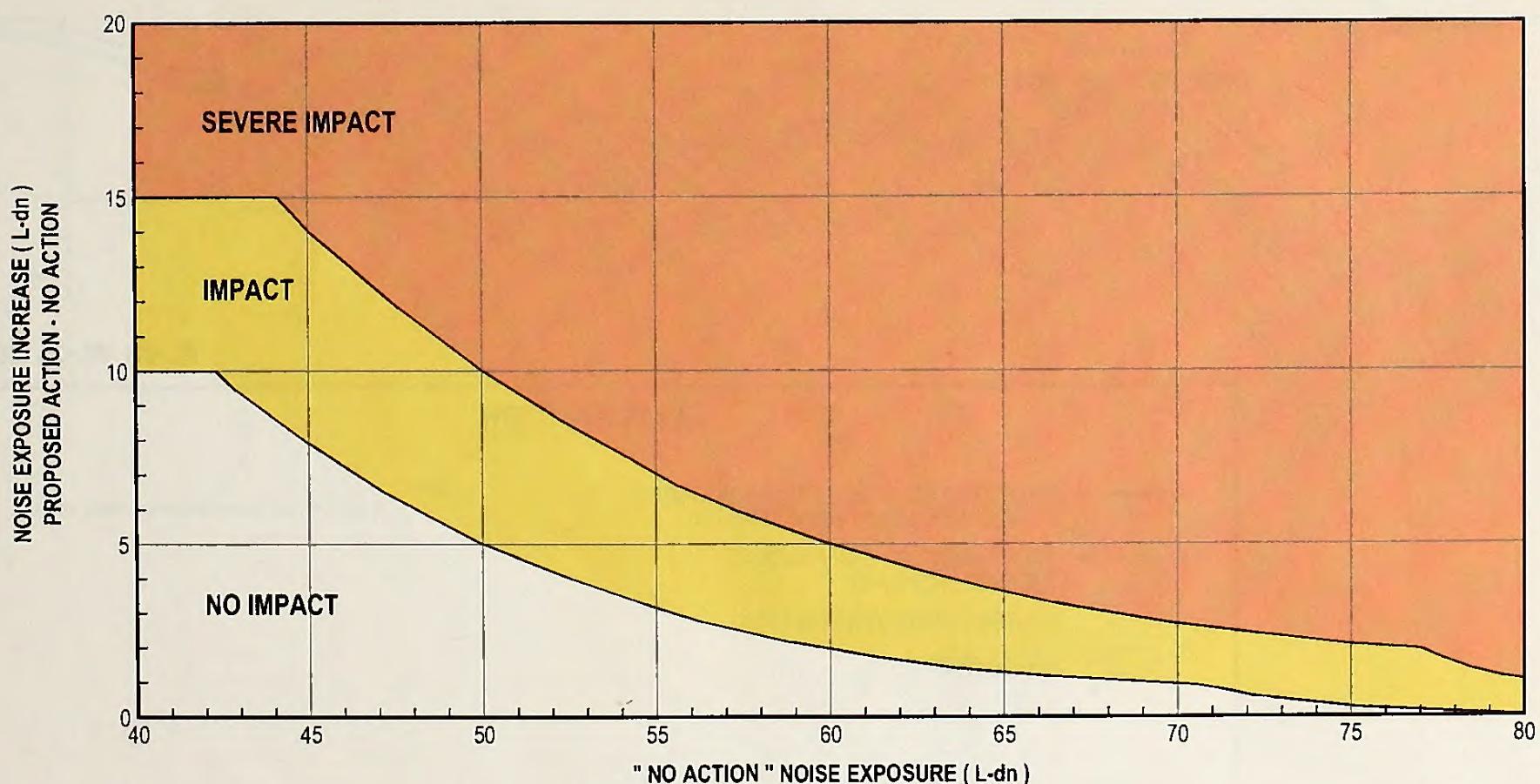
North Fork Coal DRAFT EIS
FIGURE 24
BALD EAGLE RANGE



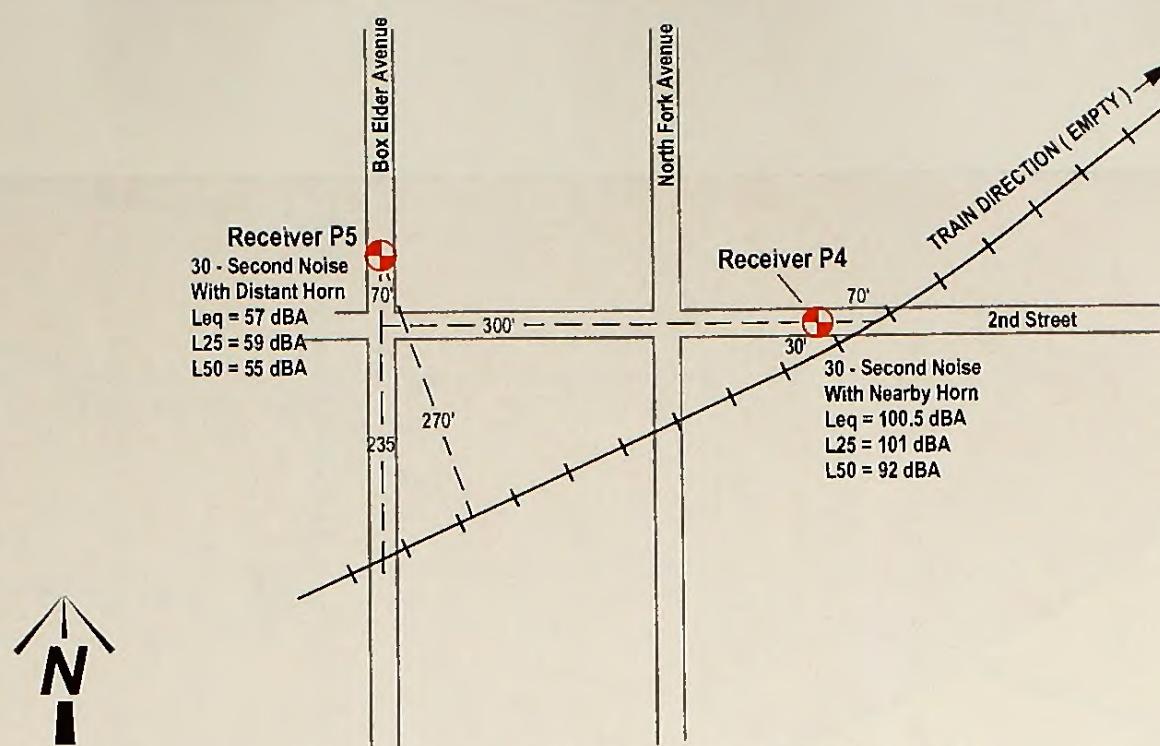
CHAIN SAW (1)
 SNOWMOBILE (INCLUDING WIND EFFECTS (1)
 DIESEL LOCOMOTIVE AT 50 FT. (2)
 HEAVY TRUCK AT 50 FT. (2)
 MOTORCYCLE (1)
 HELICOPTER AT 50 FT. ELEVATION (2)
 SUBWAY (INCLUDING SCREECH NOISE) (1)
 PLEASURE MOTORBOAT (1)
 TRAIN PASSENGER (1)
 FOOD DISPOSER (3)
 AUTOMOBILE AT 50 FT. (2)
 AUTOMOBILE PASSENGER (1)
 HOME SHOP TOOLS (3)
 FOOD BLENDER (3)
 VACUUM CLEANER (3)
 AIR CONDITIONER (WINDOW UNITS) (3)
 CLOTHES DRYER (3)
 WASHING MACHINE (3)
 REFRIGERATOR (3)



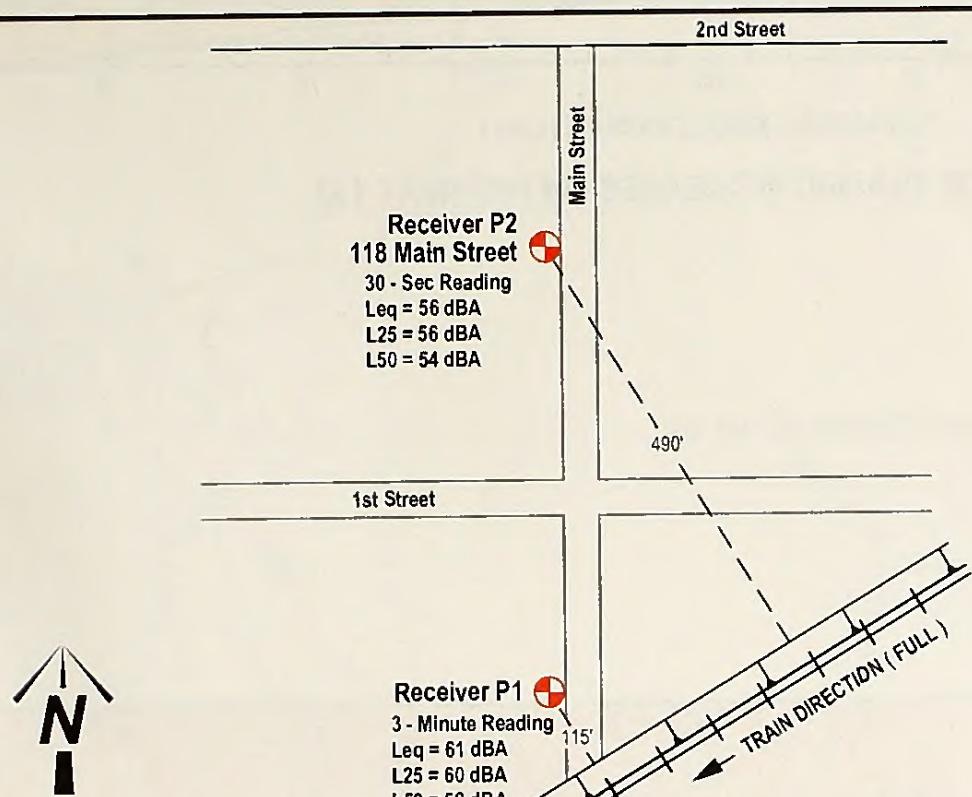
North Fork Coal DRAFT EIS
FIGURE 25
NOISE LEVELS CAUSED BY TYPICAL ACTIVITIES



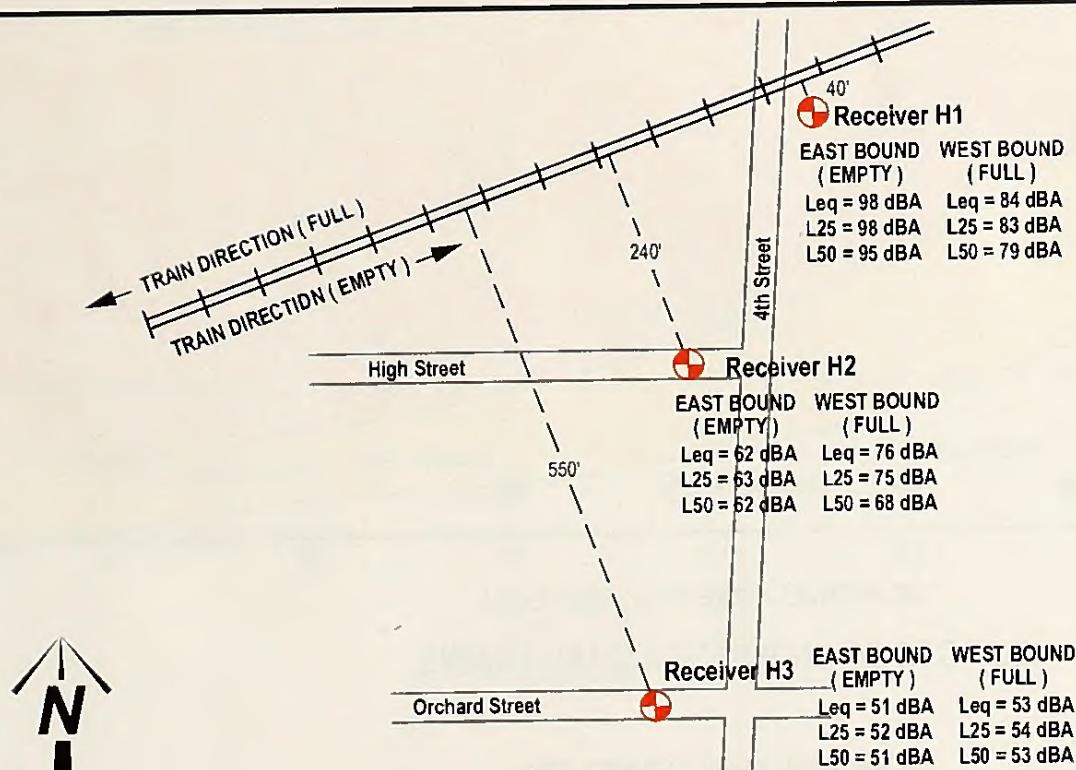
North Fork Coal DRAFT EIS
FIGURE 26
FEDERAL TRANSIT ADMINISTRATION NOISE IMPACT CRITERIA FOR HIGHWAY TRAFFIC AND RAILROAD PROJECTS



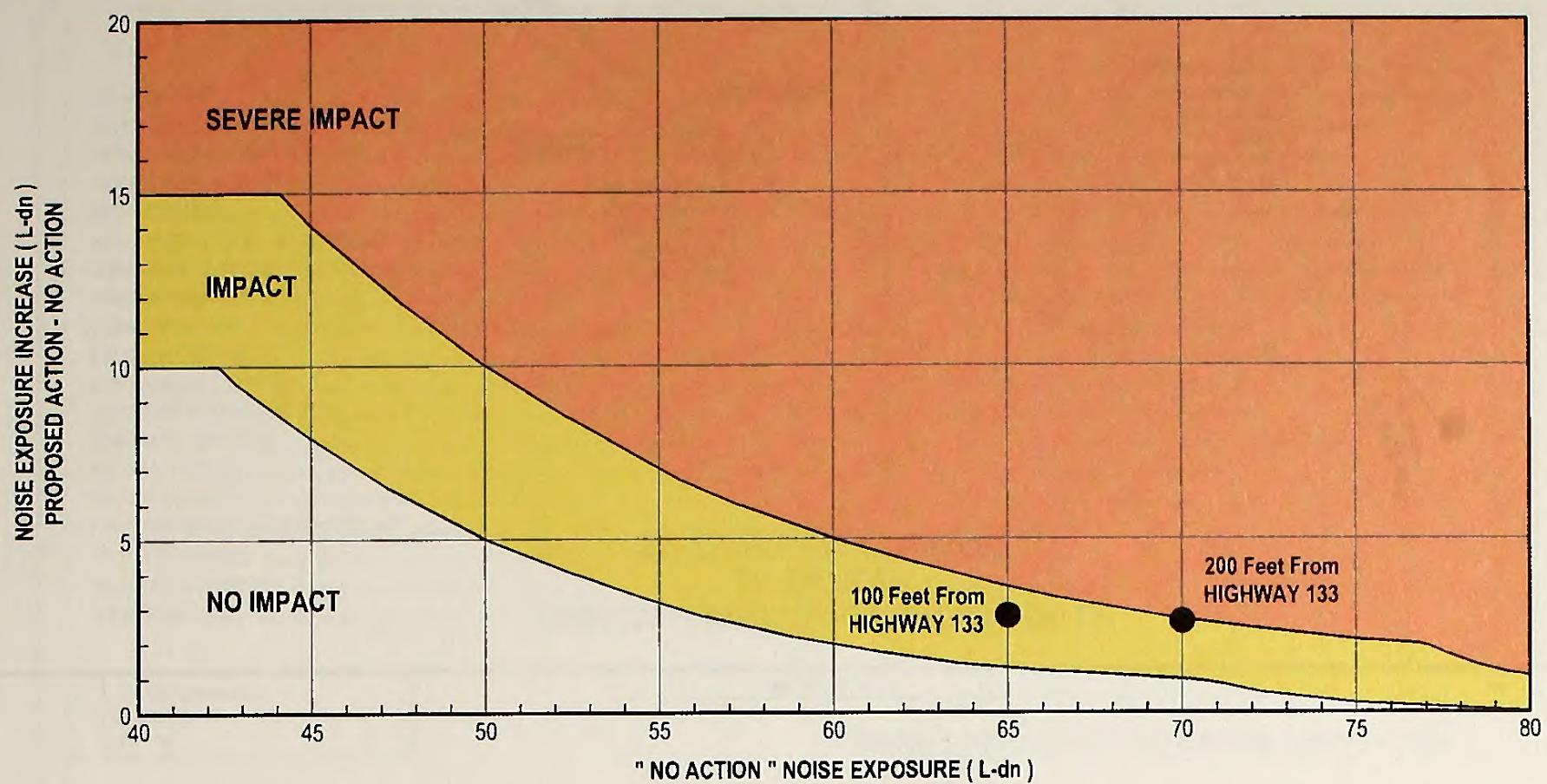
North Fork Coal DRAFT EIS
FIGURE 27
TRAIN NOISE AT PAONIA (4/21/99)



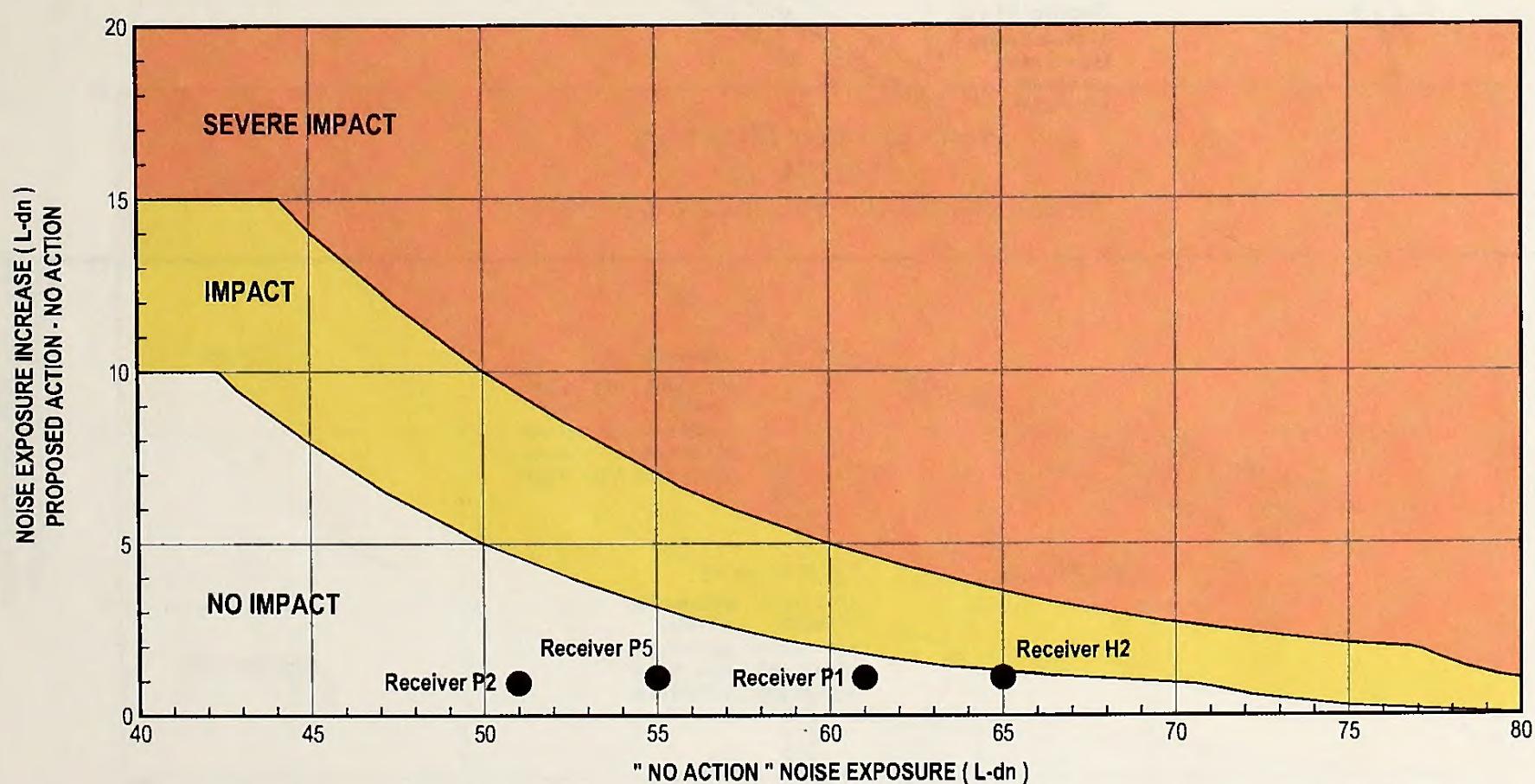
North Fork Coal DRAFT EIS
FIGURE 28
TRAIN NOISE AT PAONIA (4/25/99)



North Fork Coal DRAFT EIS
FIGURE 29
TRAIN NOISE AT HOTCHKISS (4/21/99 & 4/25/99)

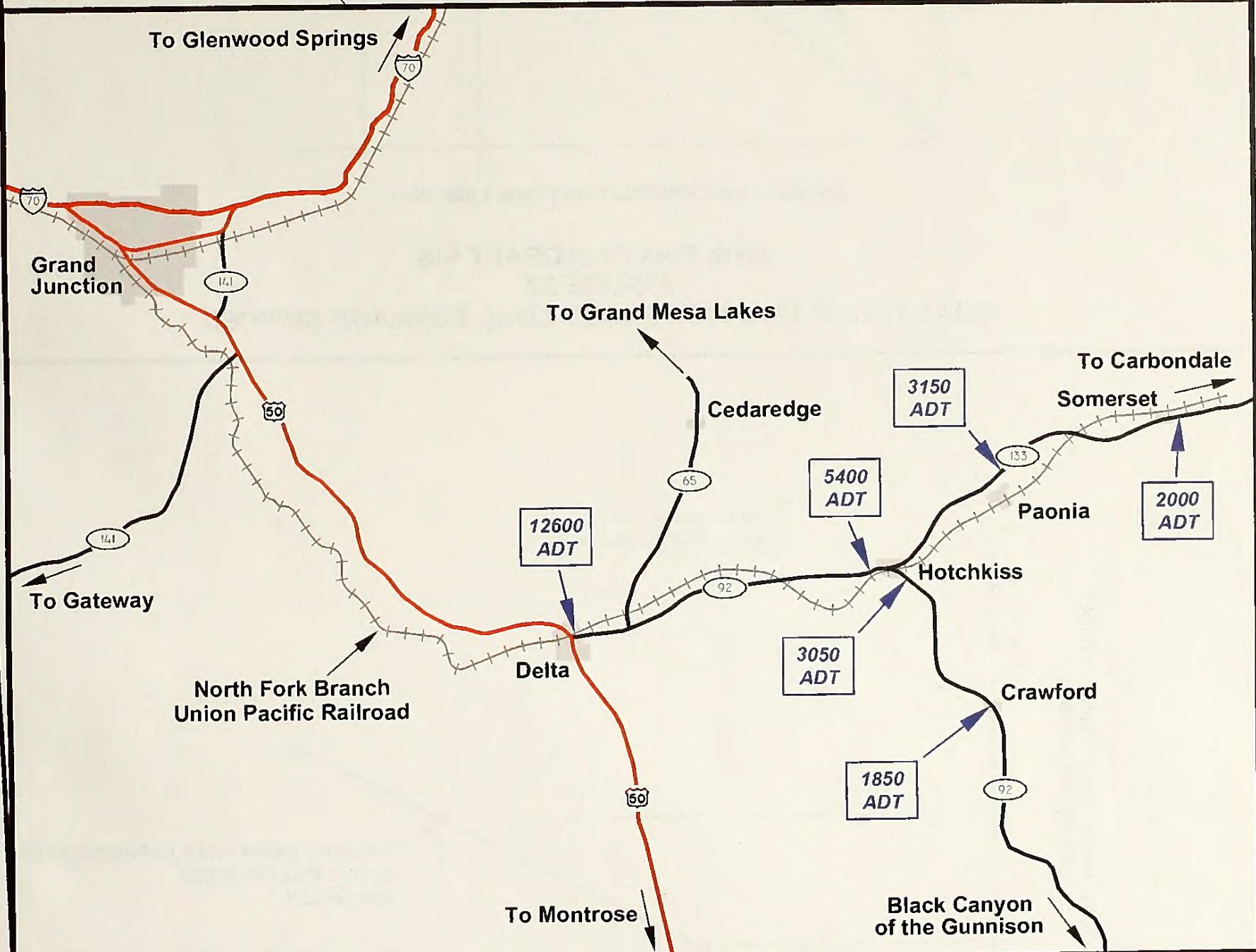


IMPACTS OF TRAFFIC INCREASES ON HIGHWAY 133



IMPACTS OF INCREASED COAL TRAINS

C O L O R A D O

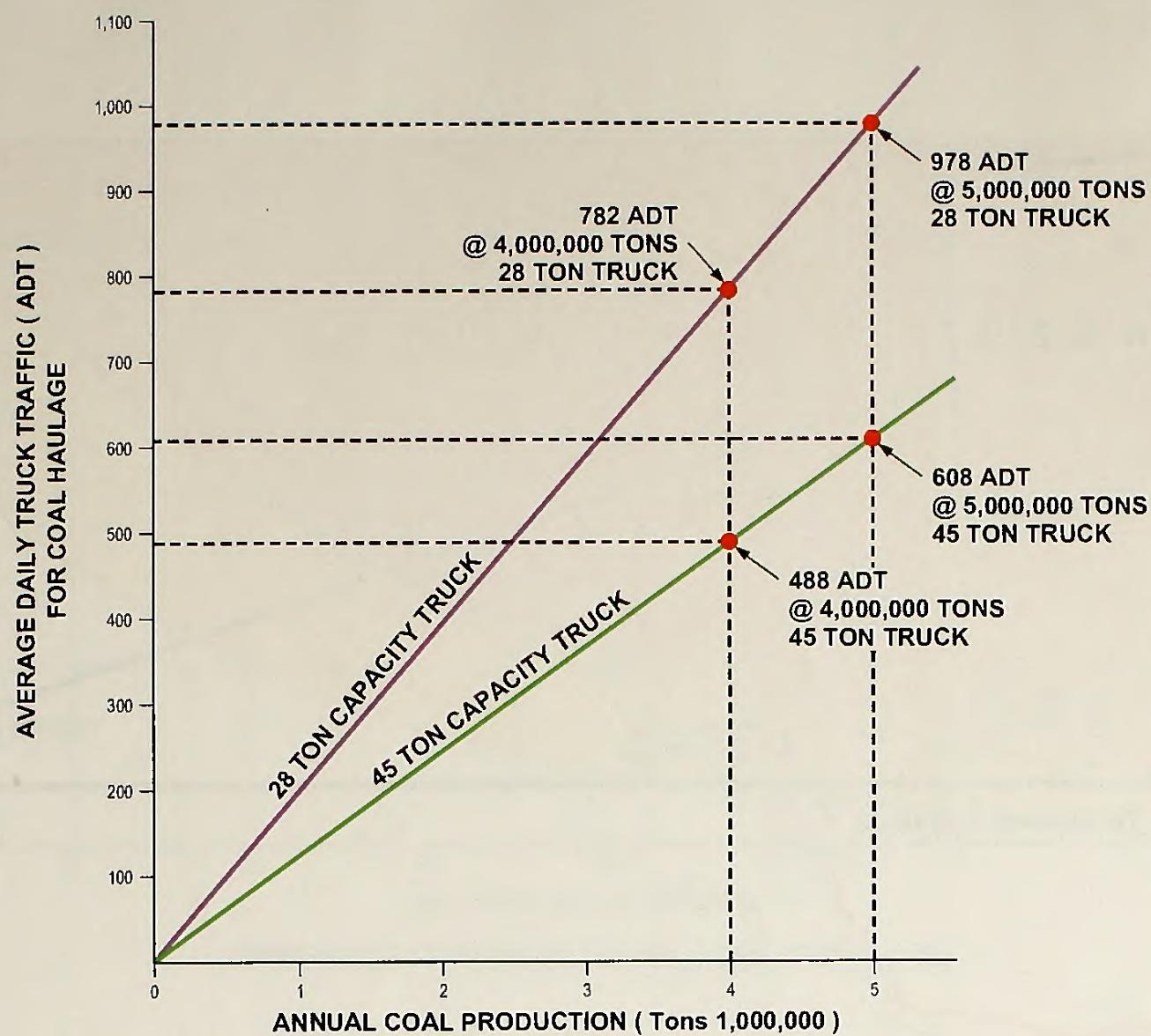


EXPLANATION

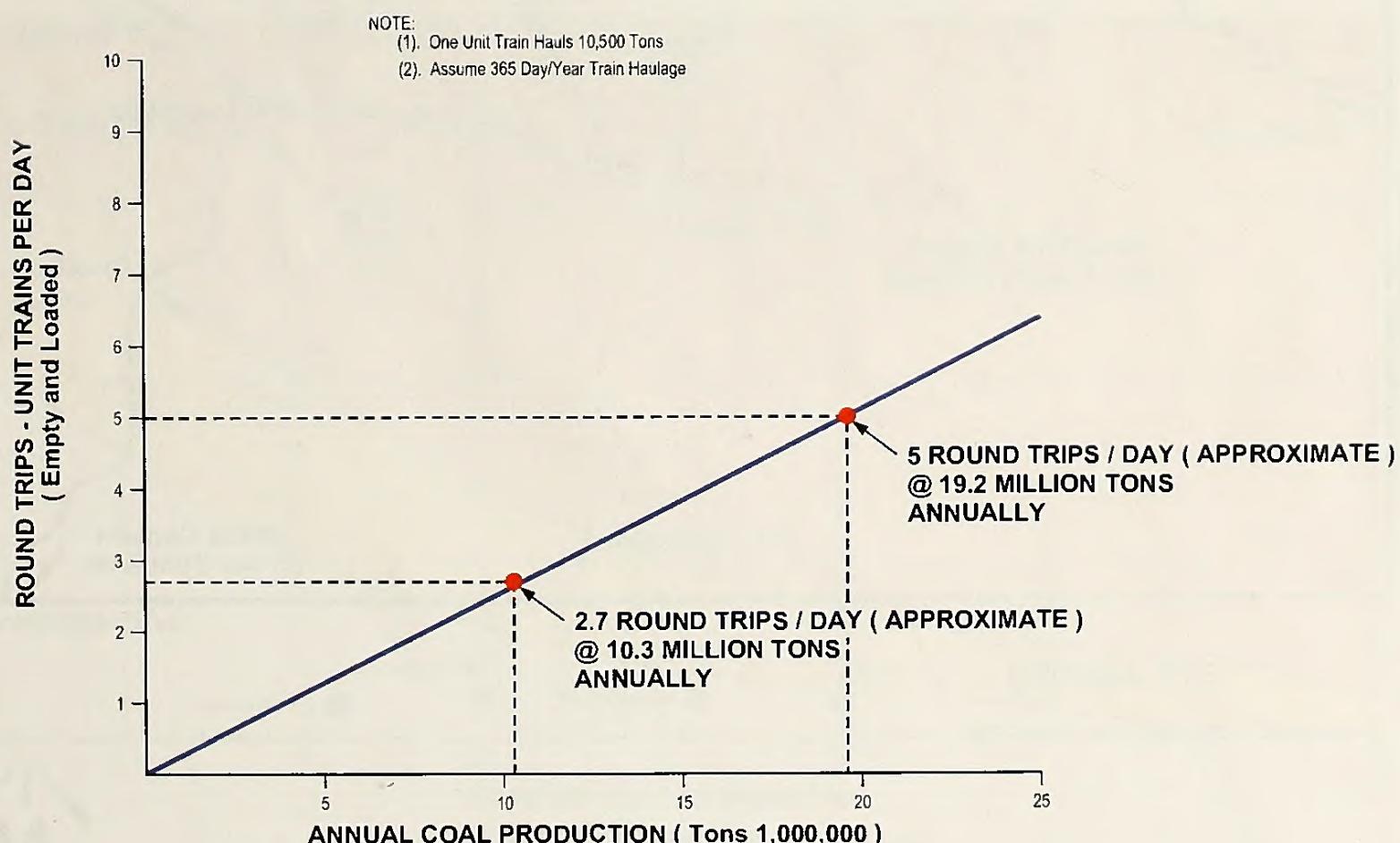
ADT AVERAGE DAILY TRAFFIC



North Fork Coal DRAFT EIS
FIGURE 31
RAIL AND ROAD SYSTEMS



North Fork Coal DRAFT EIS
FIGURE 32
COAL TRUCK TRAFFIC VERSUS COAL TONNAGE SHIPPED



North Fork Coal DRAFT EIS
FIGURE 33
AVERAGE DAILY COAL TRAIN TRAFFIC FOR NORTH FORK BRANCH
VERSUS ANNUAL COAL PRODUCTION

APPENDIX FIGURES



R. 91 W. R. 90 W.
DELTA COUNTY
GUNNISON COUNTY

EXPLANATION

PROPOSED COAL LEASE TRACT BOUNDARY
LEASE BOUNDARY

PROPOSED COAL EXPLORATION
LICENSE BOUNDARY

- No. 2 POWERLINE
- No. 3 COUNTY ROAD
- No. 11 RAPTOR NEST SITE
- No. 12 EAGLE CONCENTRATION AREA
- No. 14 RIPARIAN AREA
- No. 15 ELK SEVERE WINTER AREA



SCALE
2000' 0 2000'
CONTOUR INTERVAL 200FT.

NOTE:

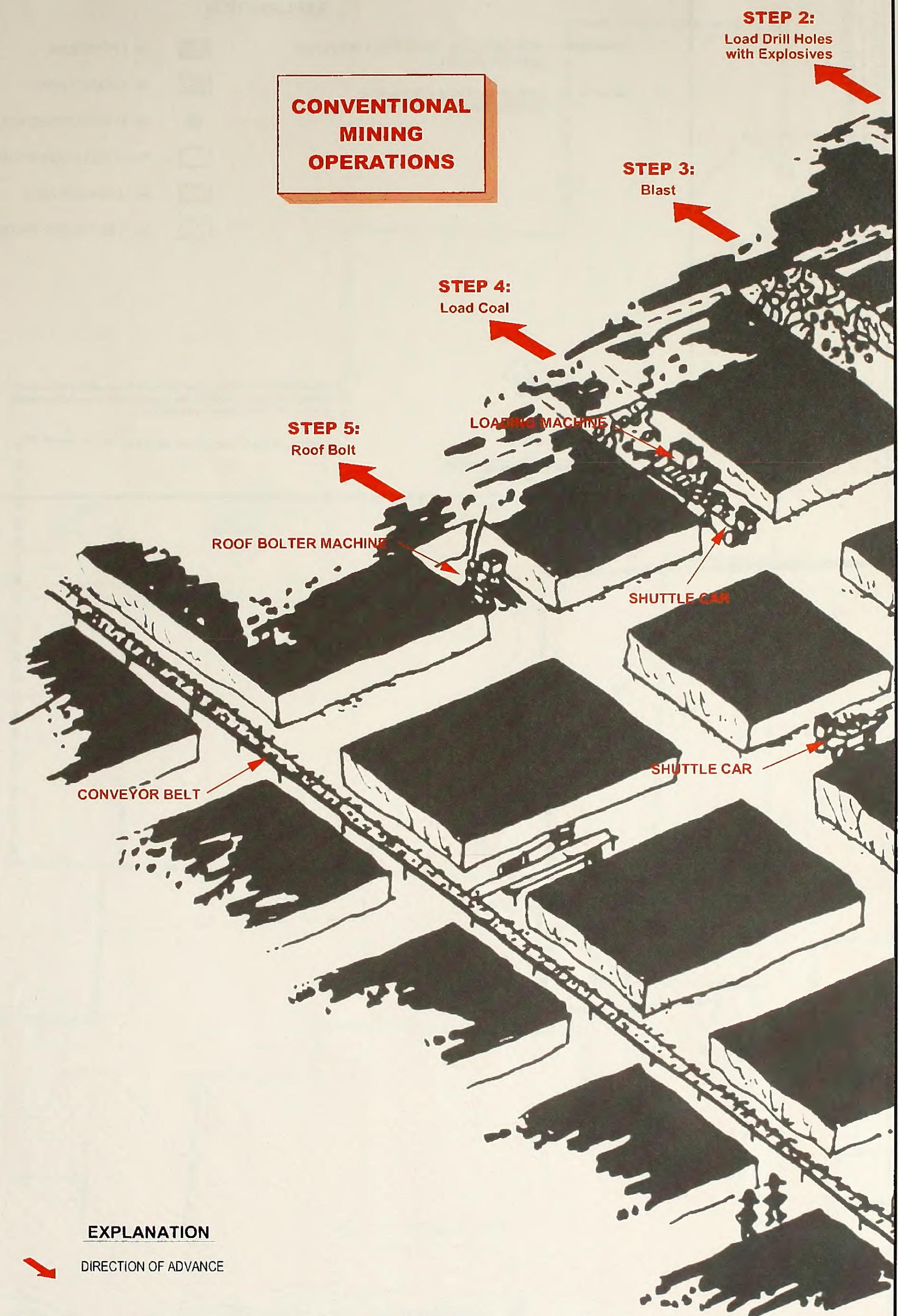
(1) After applying the exceptions, all lands in lease tracts were suitable for mining with inclusion of appropriate restrictions. See Appendices C & D, Unsuitability Analyses for the Iron Point and Elk Creek Coal Lease Tracts.

OXBOW SURFACE FACILITIES

North Fork Coal DRAFT EIS

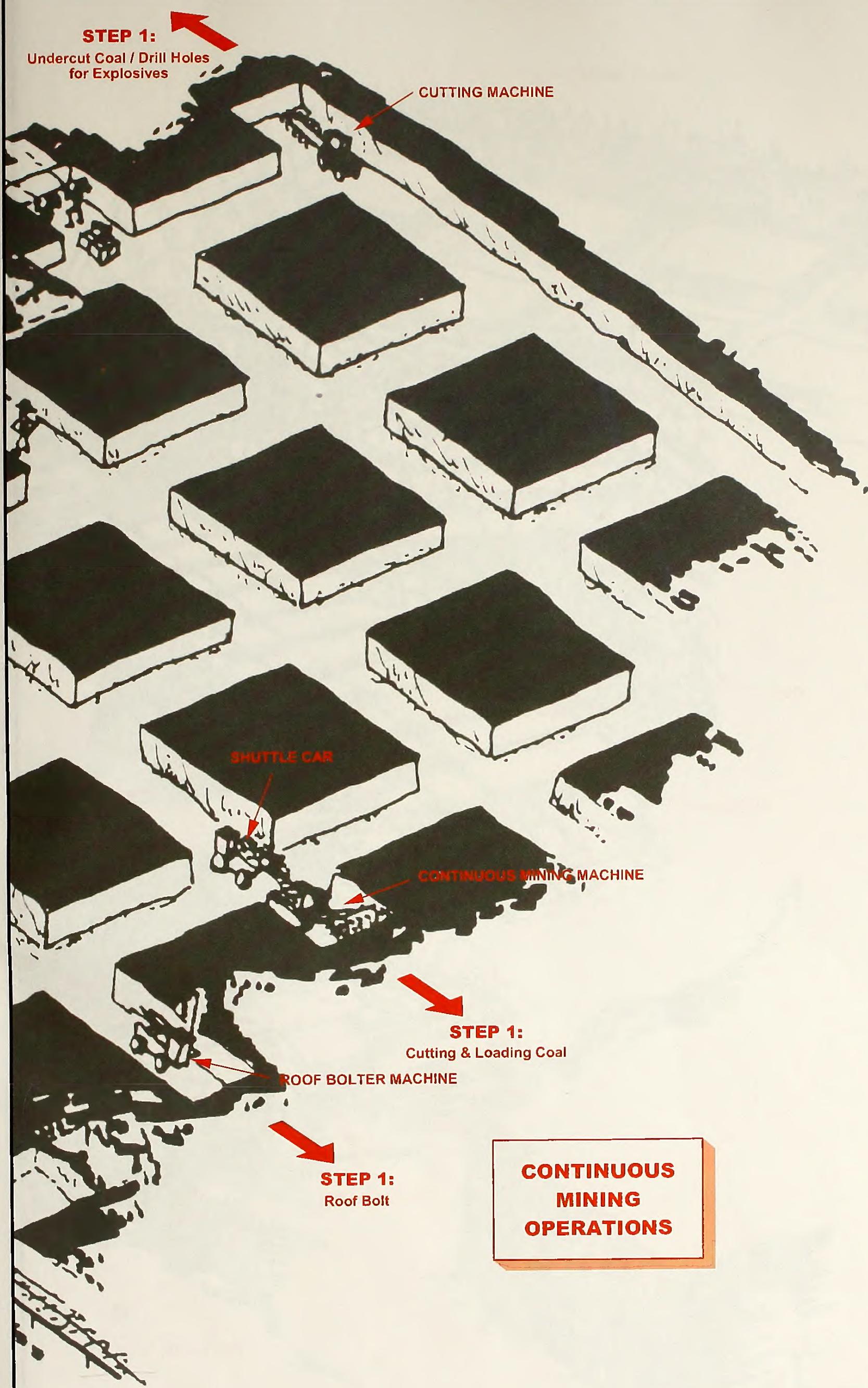
FIGURE C/D 1
COAL UNSUITABILITY CRITERIA LOCATIONS

**CONVENTIONAL
MINING
OPERATIONS**

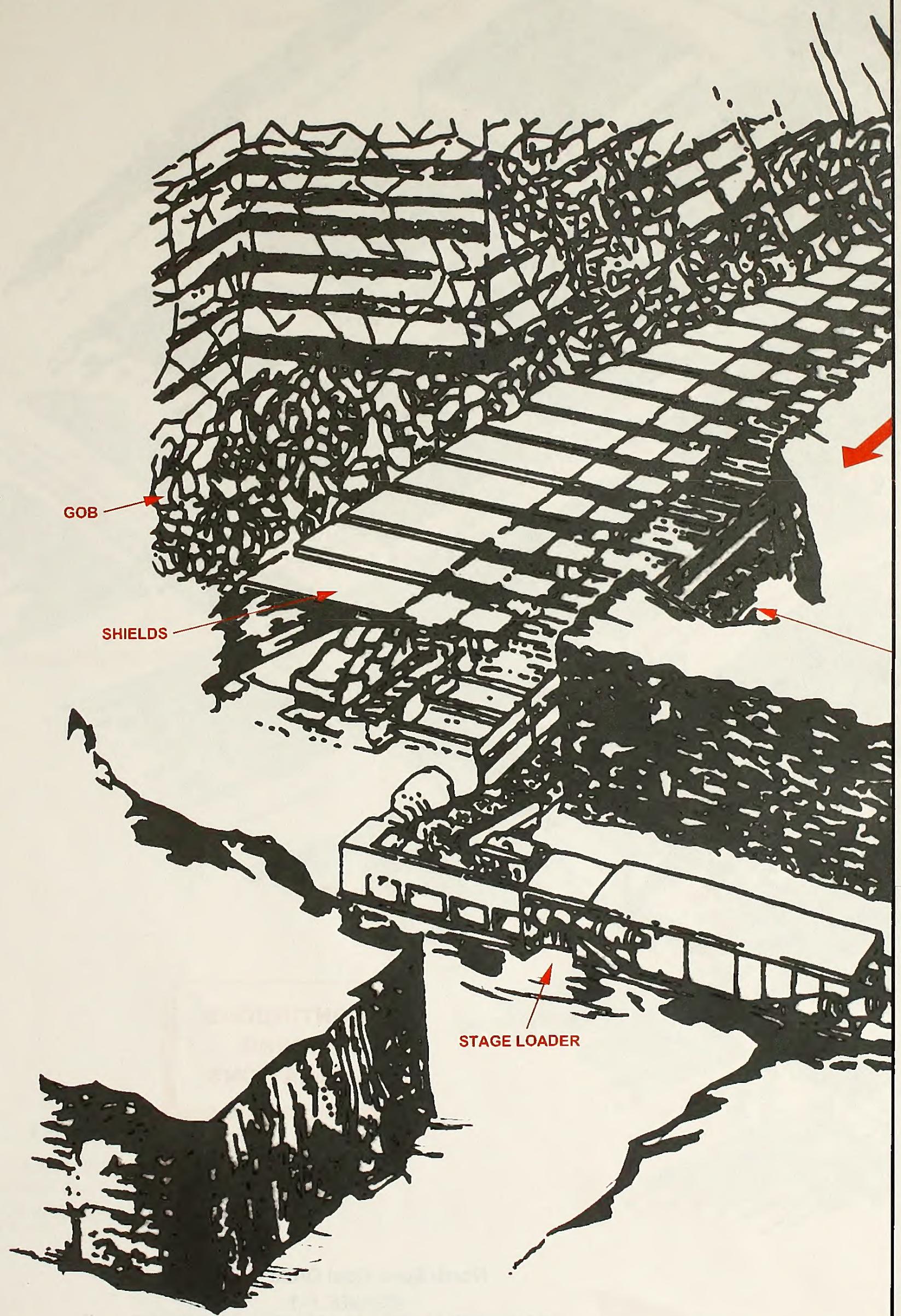


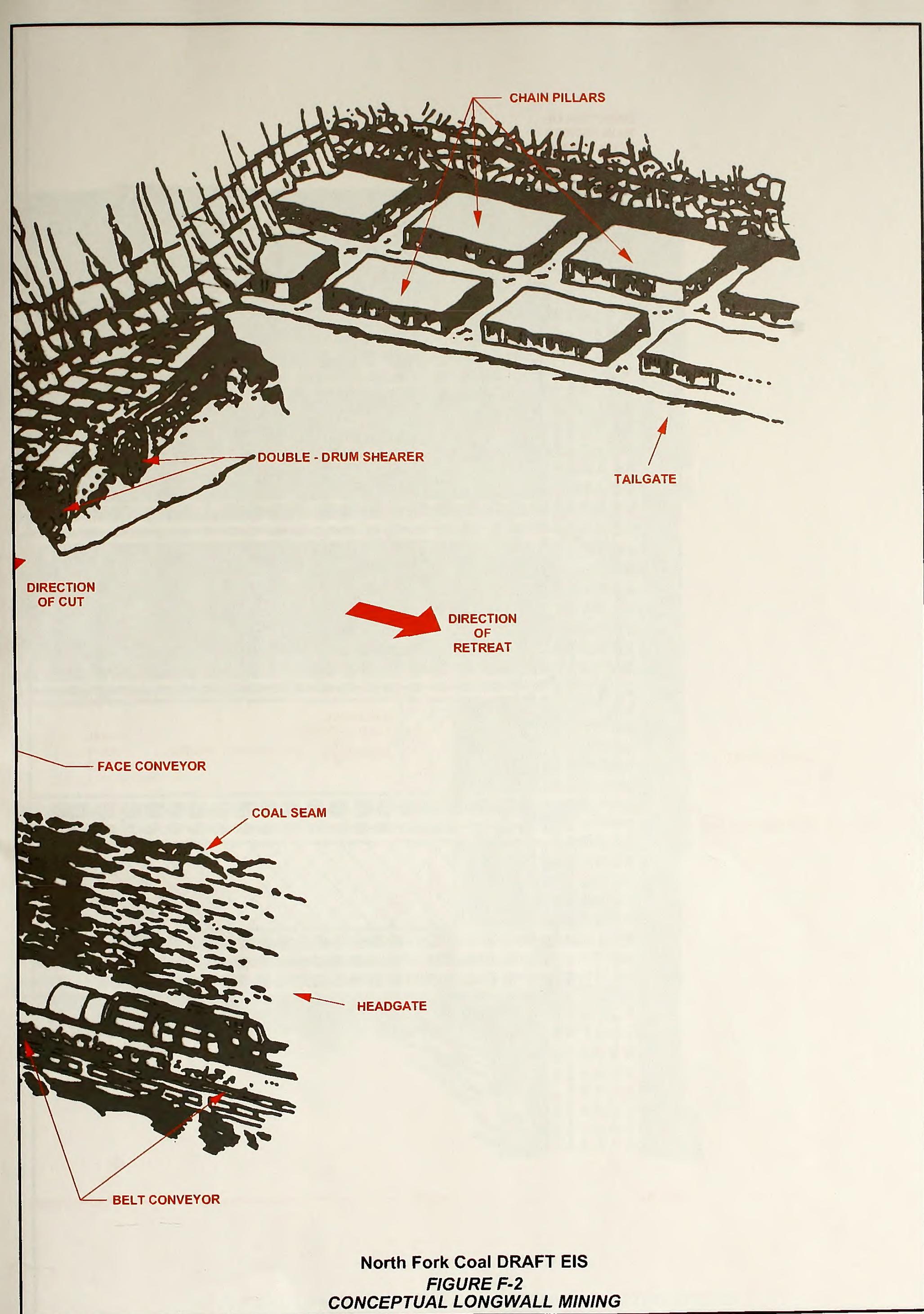
EXPLANATION

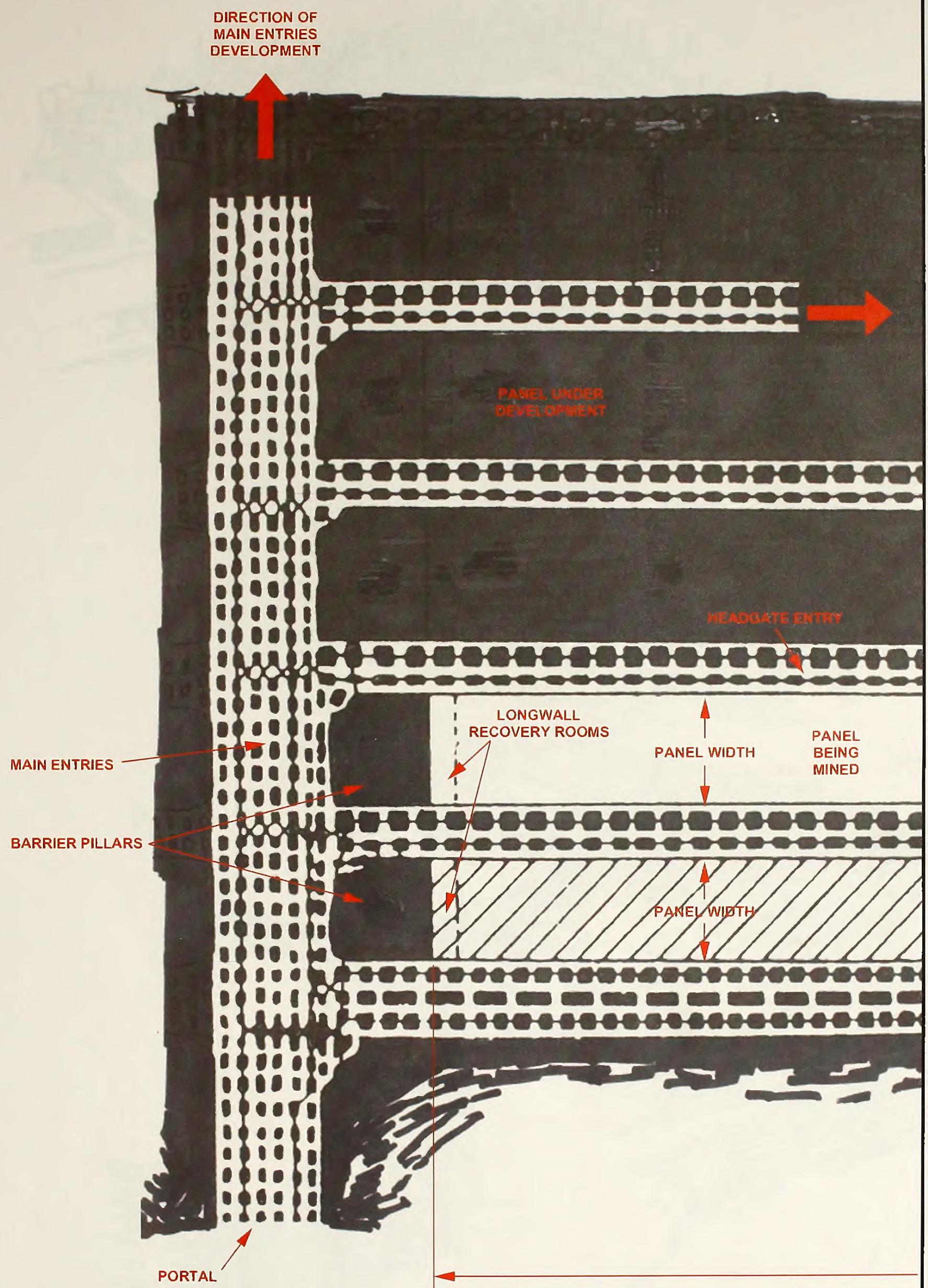
DIRECTION OF ADVANCE

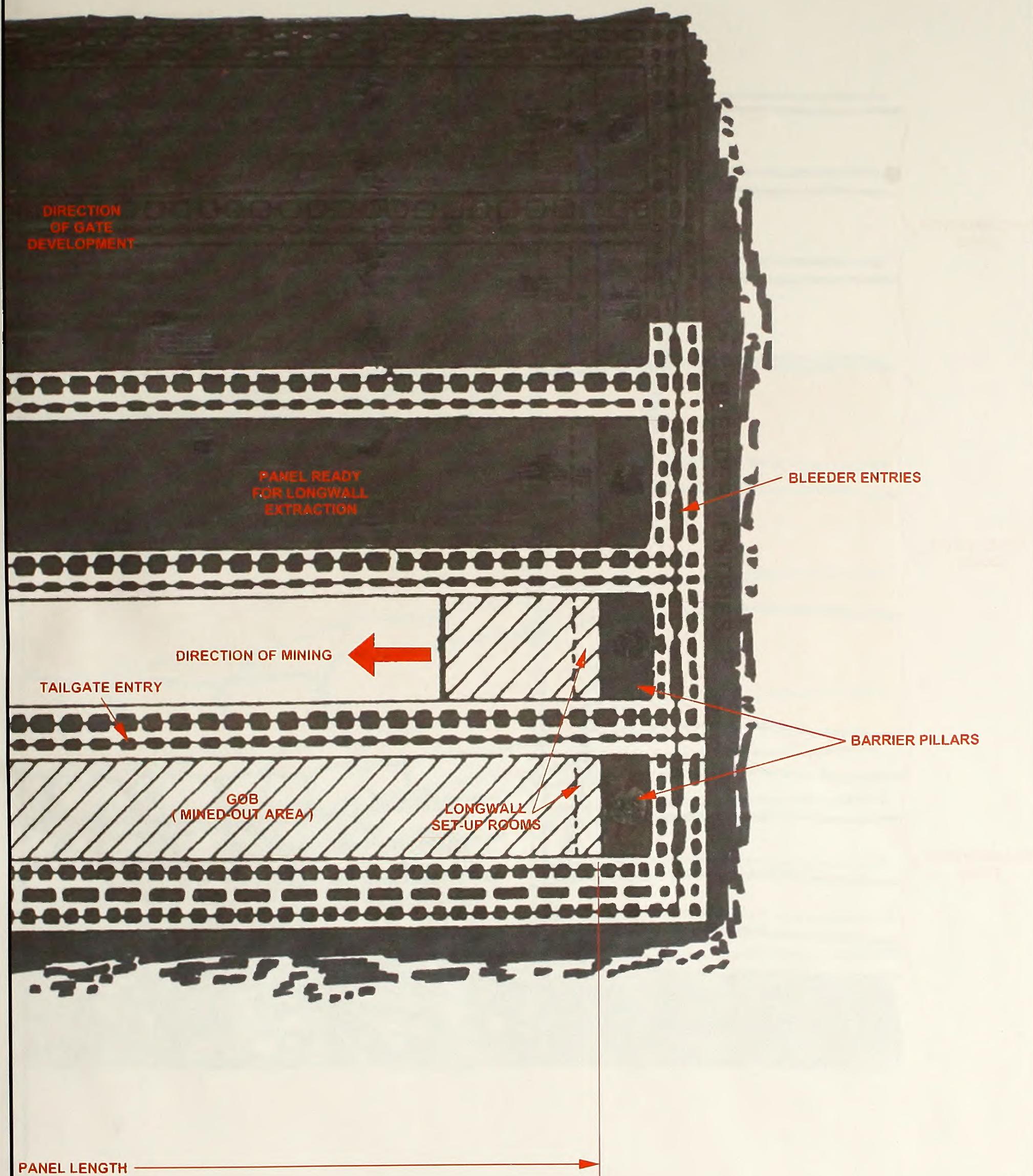


North Fork Coal DRAFT EIS
FIGURE F-1
CONCEPTUAL ROOM AND PILLAR MINING

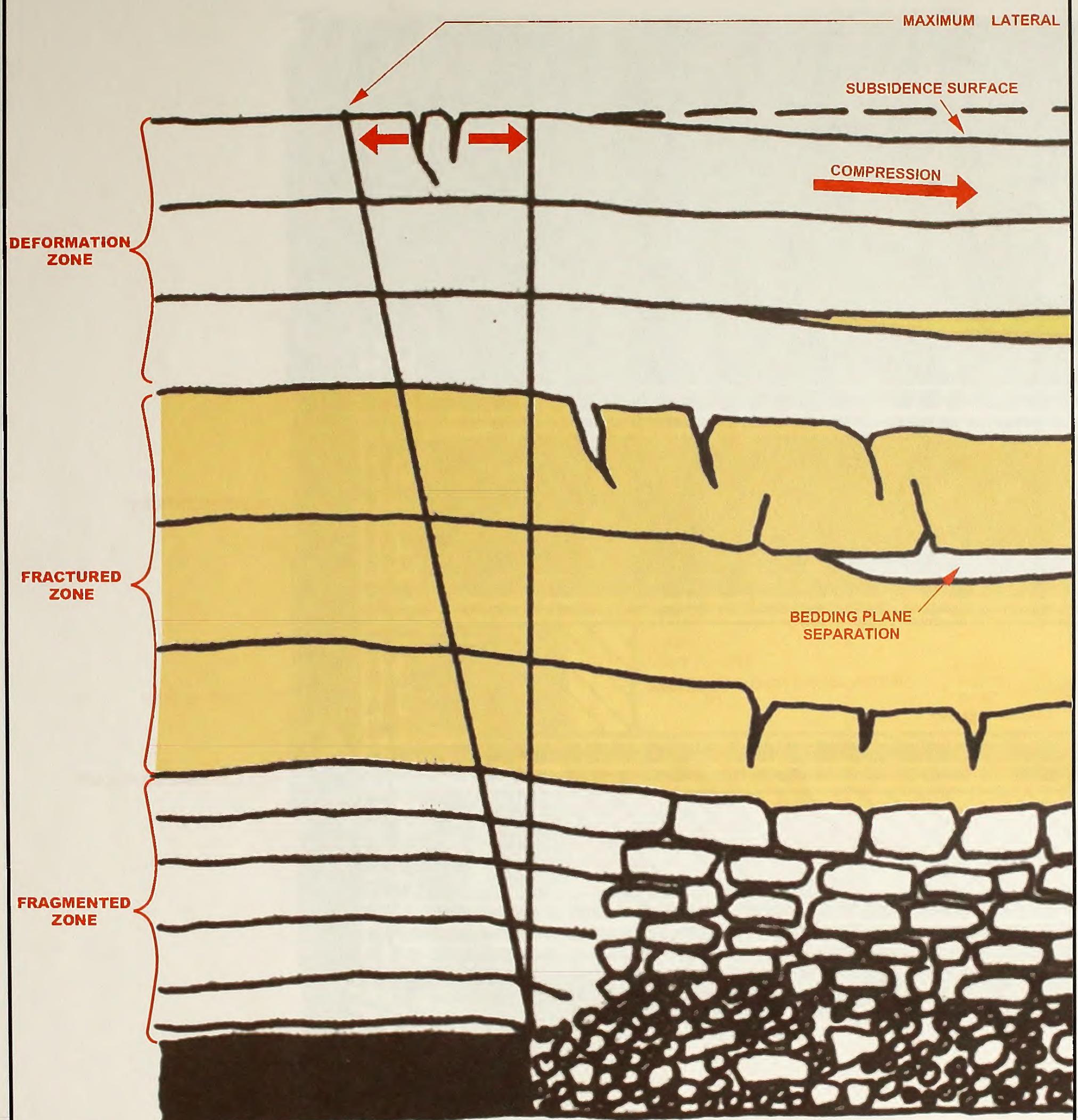


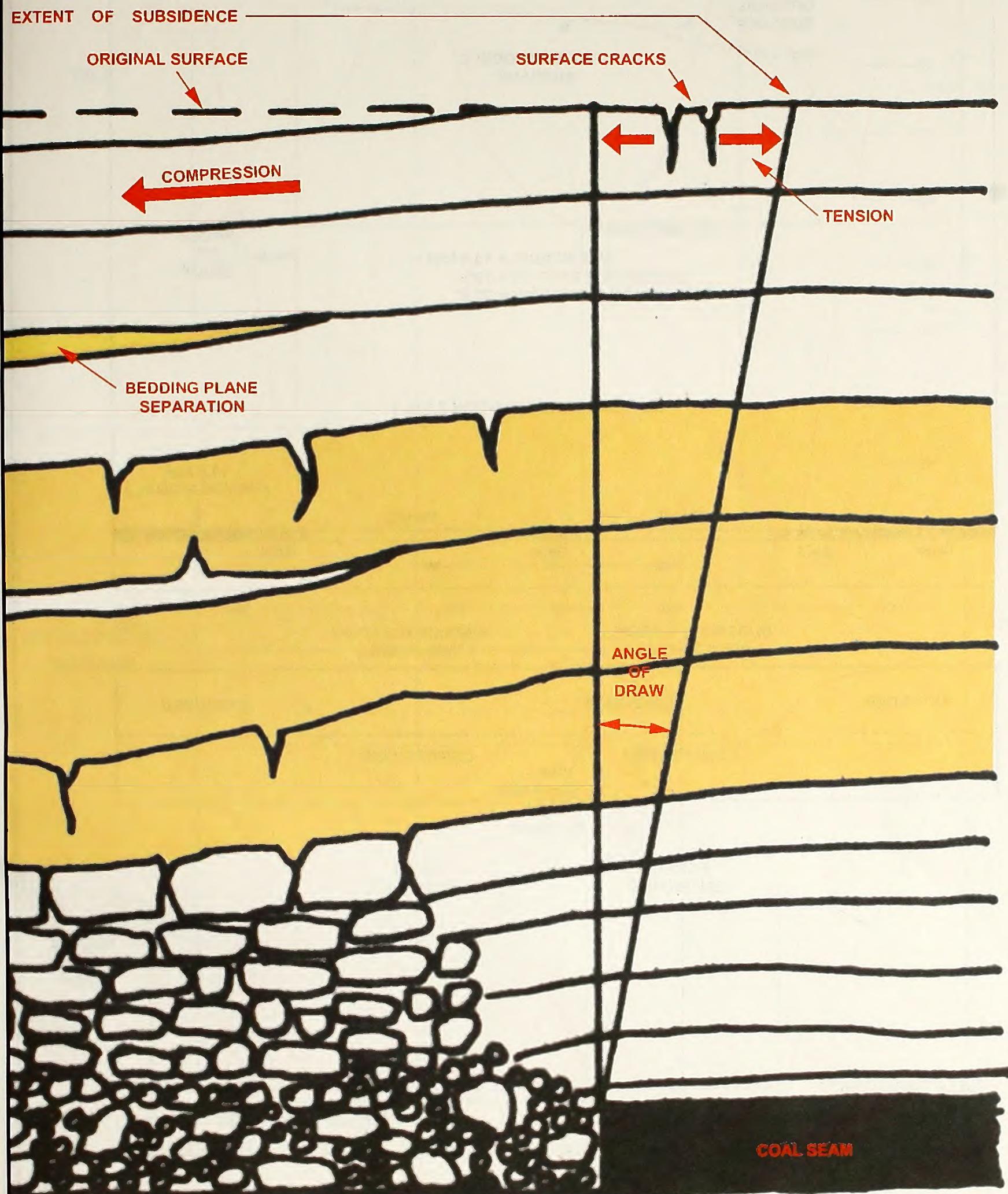




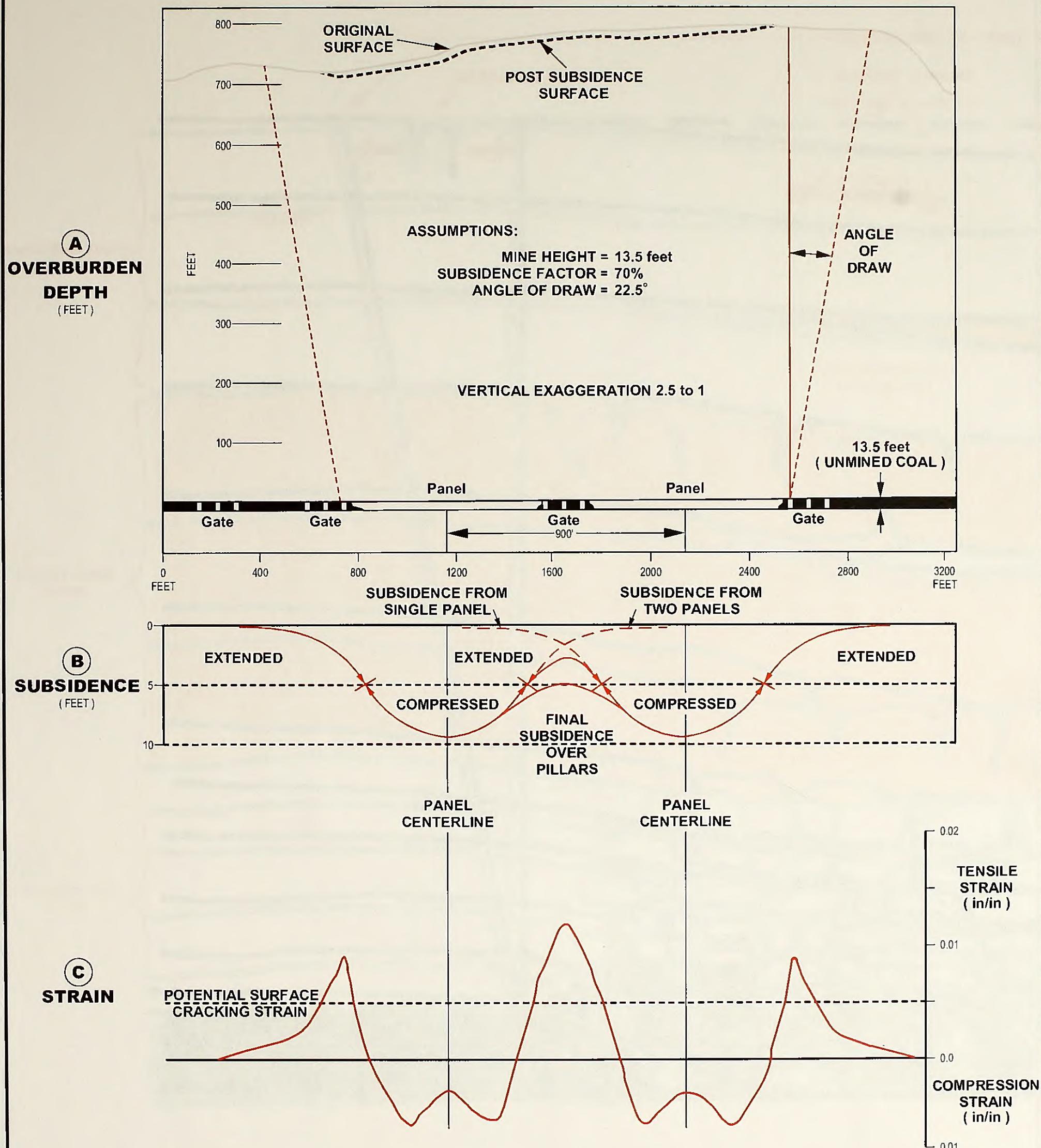


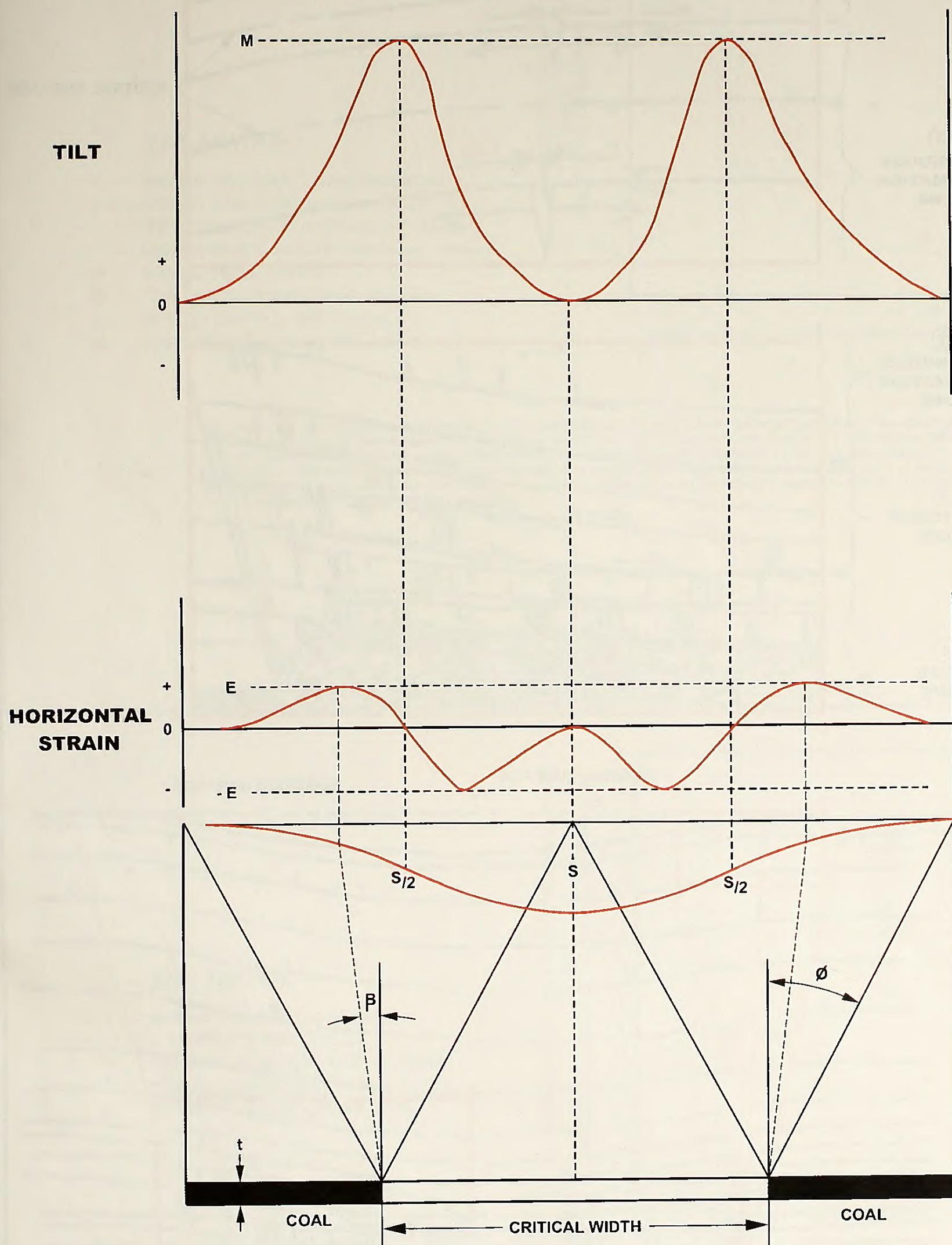
North Fork Coal DRAFT EIS
FIGURE F-3
TYPICAL LONGWALL PANEL LAYOUT IN THE UNITED STATES





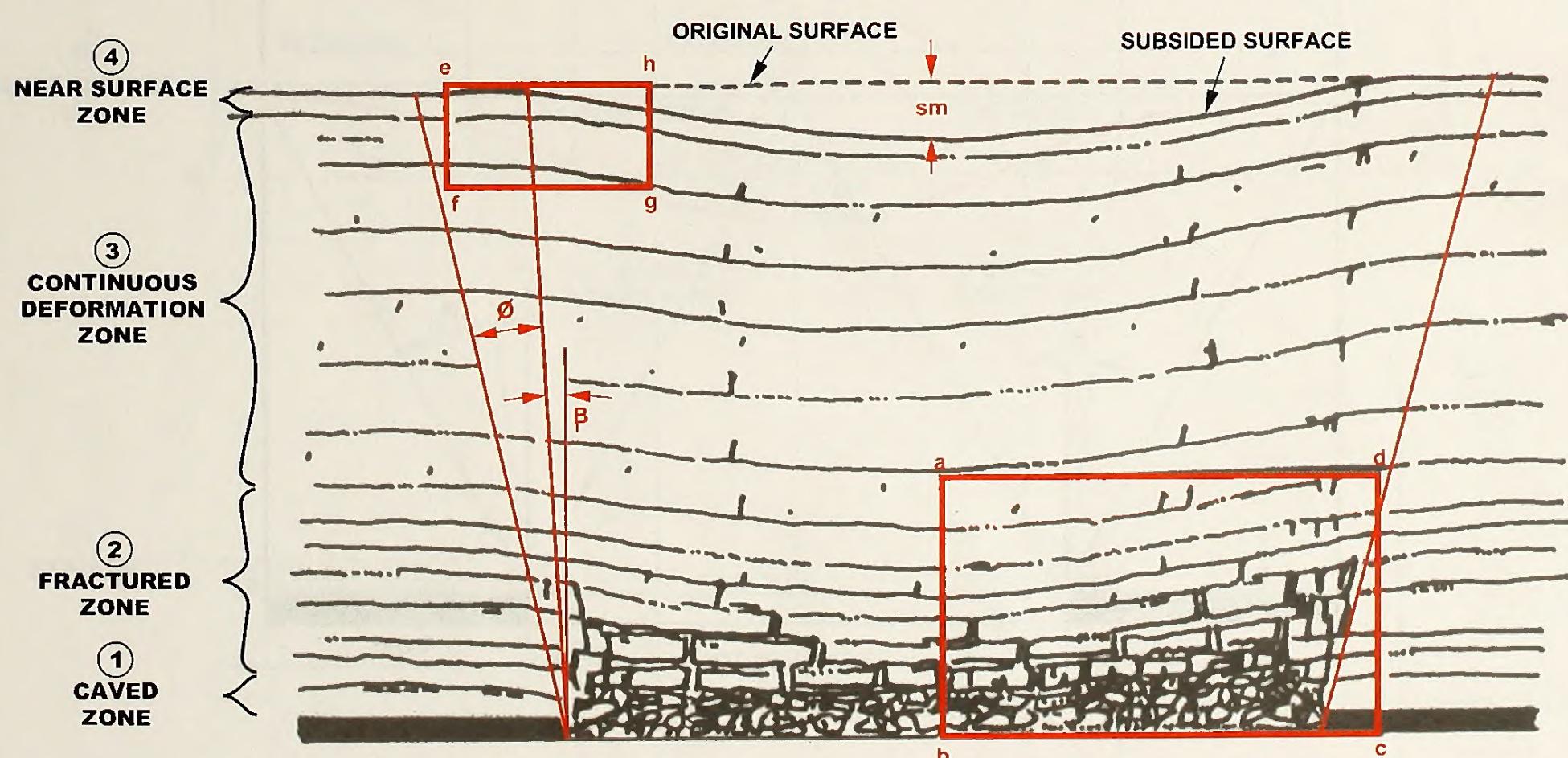
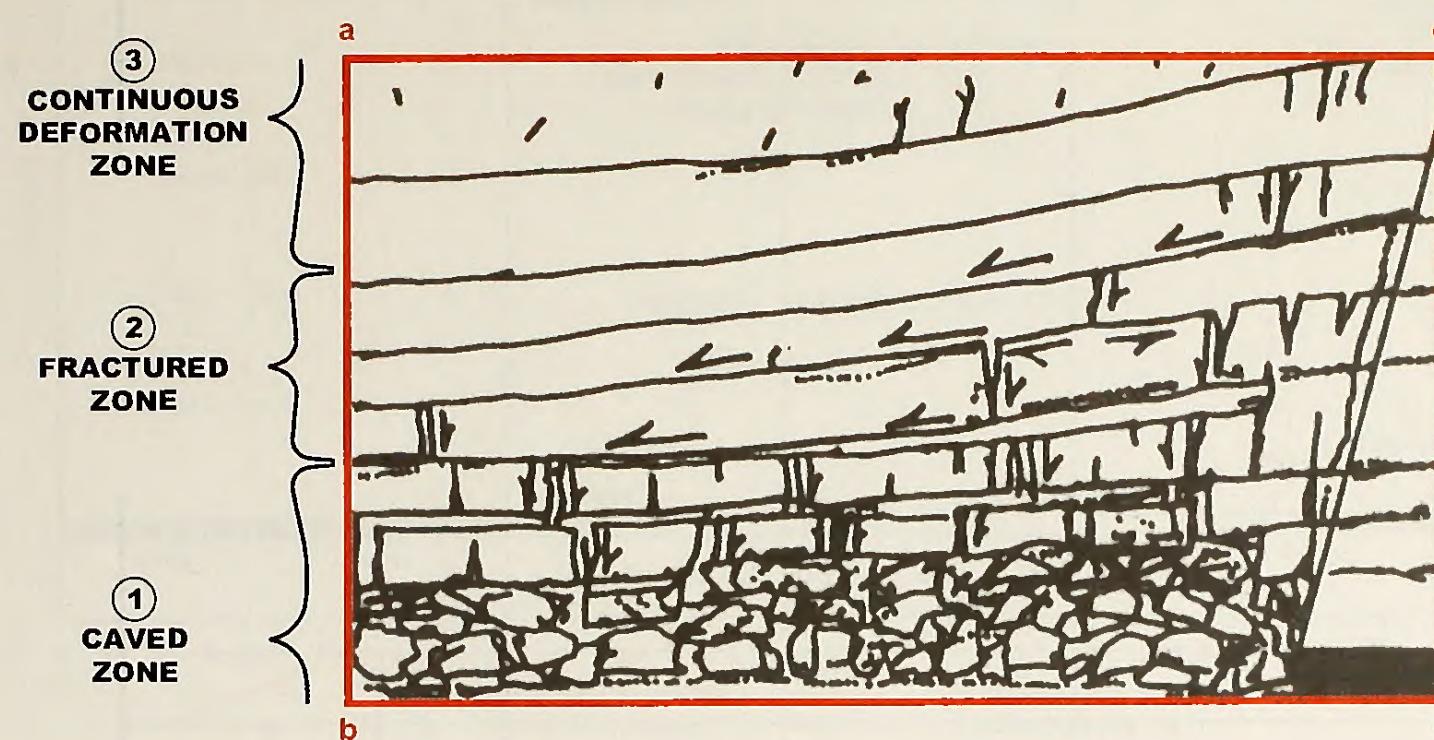
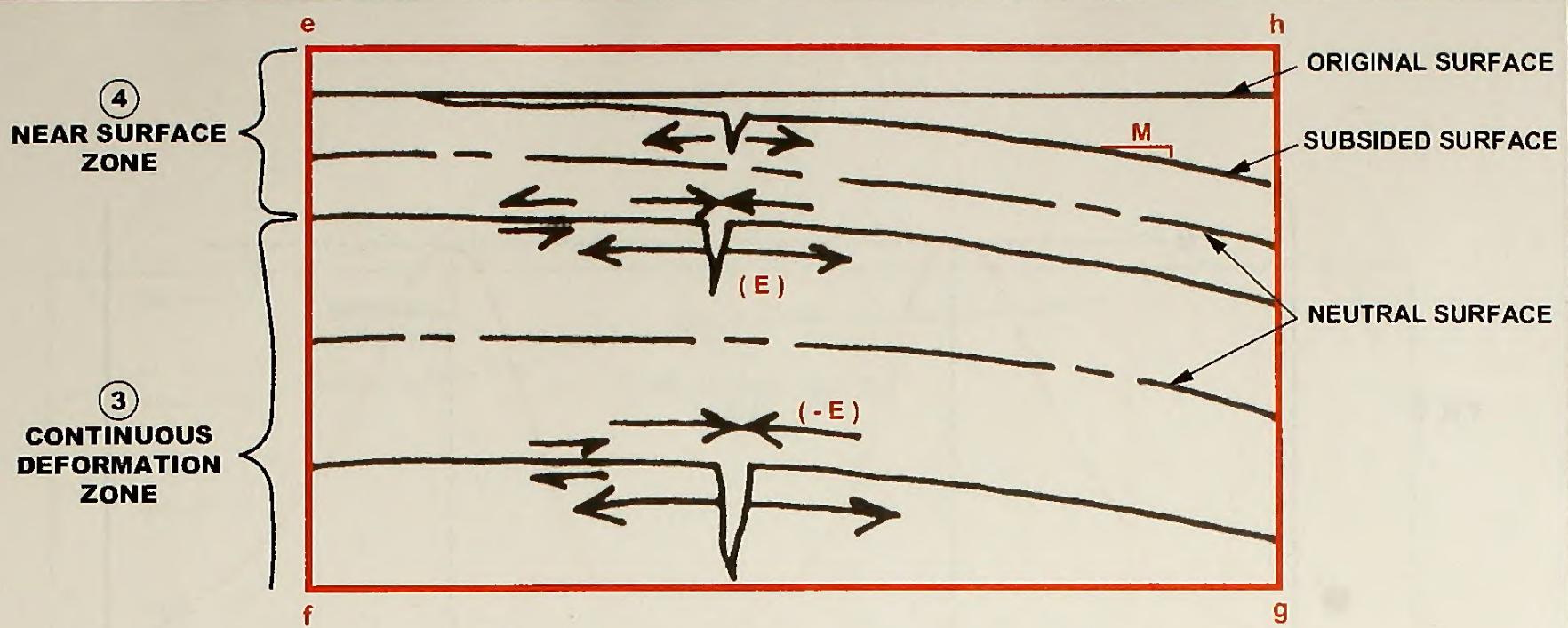
North Fork Coal DRAFT EIS
FIGURE F-4
CONCEPTUAL REPRESENTATION OF SUBSIDENCE DEFORMATION ZONES





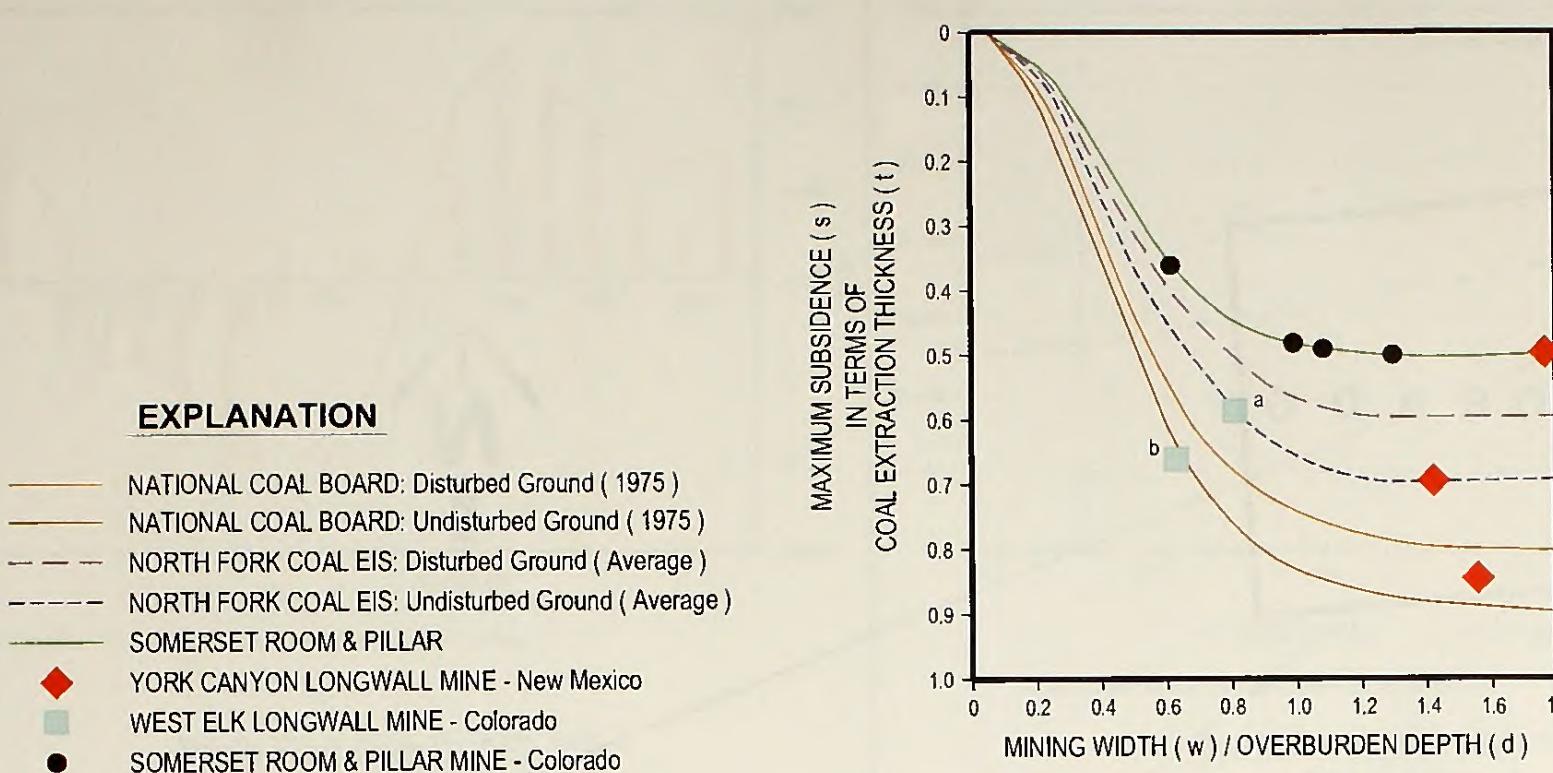
Conceptual diagram showing a typical subsidence profile and related parameters for a longwall mining panel of critical width. Parameters discussed in the North Fork Coal EIS Lease Tracts are maximum vertical displacement (S), tilt (M), strain (E), draw angle (limit angle) (ϕ), break angle (β), and (t thickness of coal extracted).

North Fork Coal DRAFT EIS
FIGURE K-1
TYPICAL SUBSIDENCE PROFILE FOR LONGWALL



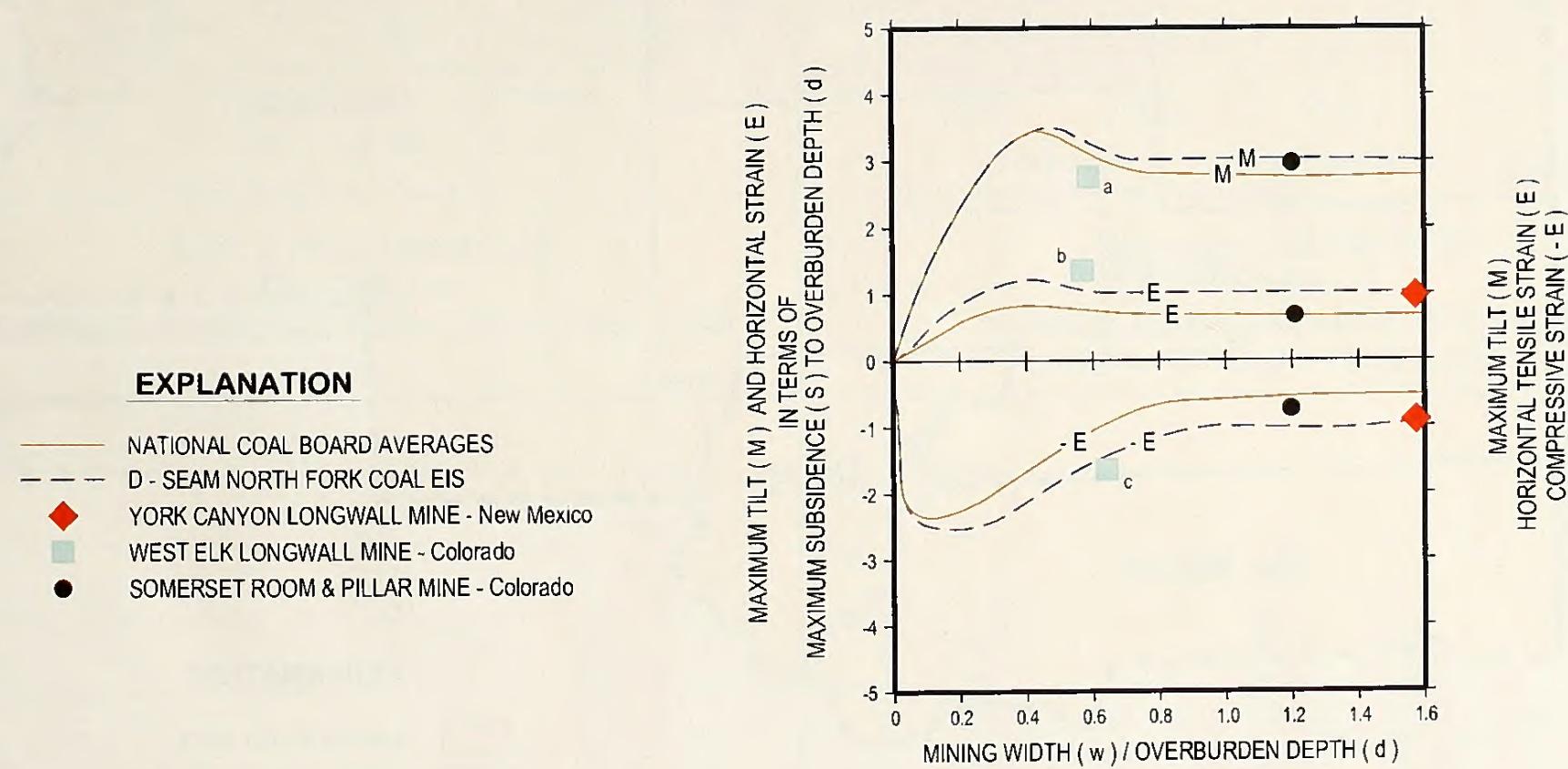
Conceptual cross section showing a typical subsidence process shortly after longwall mining (i.e. in dynamic state); the four zones of subsidence typical of the Somerset - Paonia area are shown. Enlargement a, b, c, d indicates possible avenues of water flow in the caved and fractured zone; e, f, g, h shows tilt (M) and strain (E, -E) in the continuous deformation and near-surface zones.

North Fork Coal DRAFT EIS
FIGURE K-2
TYPICAL LONGWALL SUBSIDENCE CROSS SECTION



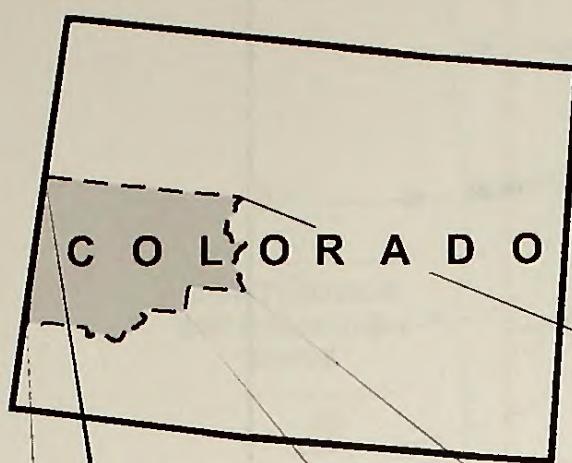
Graph showing maximum vertical displacement (commonly called maximum subsidence) (S) values in terms of coal extraction thickness (t) versus the ratio of mining curves from the National Coal Board in undisturbed ground (U.G.) and disturbed ground (D.G.). Points in circles are from the Somerset room - and - pillar mine. Points in diamonds are from the York Canyon longwall mine in undisturbed ground in the New Mexico (Gentry and Abel, 1978) measured in a valley (upper point), on a ridge (lower point), and an average value (middle point). Squares are from the West Elk longwall mine: a, average in disturbed ground with subdued, rolling topography; b, in disturbed ground on steep ridge: data used with permission from Mountain Coal Company. Long - and - short - dashed curves represents projected average values for the North Fork Coal Lease Tracts in undisturbed ground (U.G.) and disturbed ground (D.G.).

North Fork Coal DRAFT EIS
FIGURE K-3
MAXIMUM VERTICAL DISPLACEMENT FOR LONGWALL

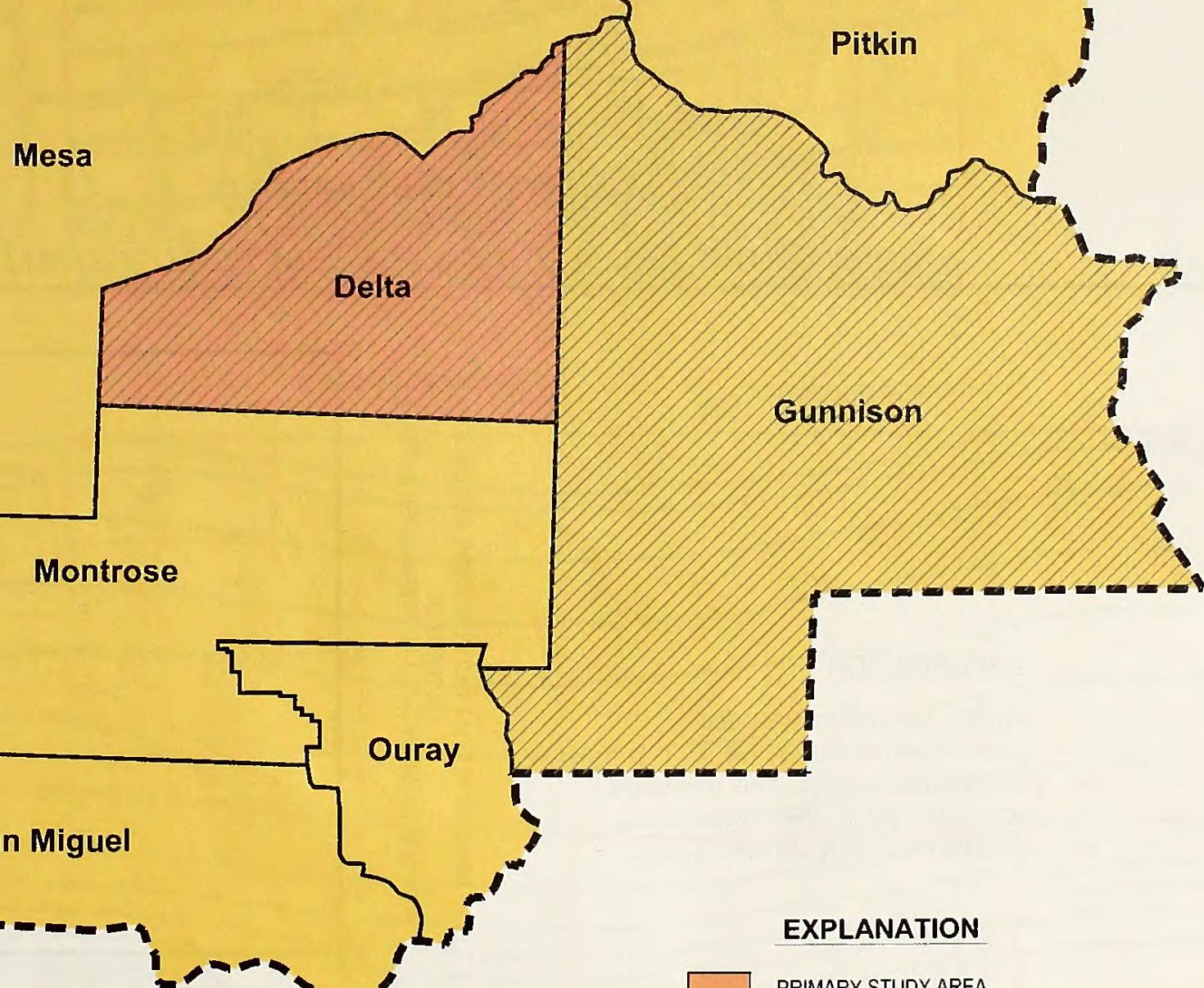


Maximum tilt (M) and horizontal tensile strain (E) and compressive strain ($-E$), in terms of S/d versus the ratio of mining width (W) to overburden depth (d). Solid lines are from NCB averages; circles are from the Somerset room - and - pillar mine; diamonds from the York Canyon longwall mine, New Mexico. Squares are average values from the West Elk longwall mine: a, average tilt; b, average horizontal tensile strain at panel boundaries; c, average horizontal compressive strain; data used with permission from Mountain Coal Company. Dashed line is the projected average for mining the D - seam in the North Fork Coal EIS Lease Tracts.

North Fork Coal DRAFT EIS
FIGURE K-4
TIILT AND STRAIN



Not To Scale

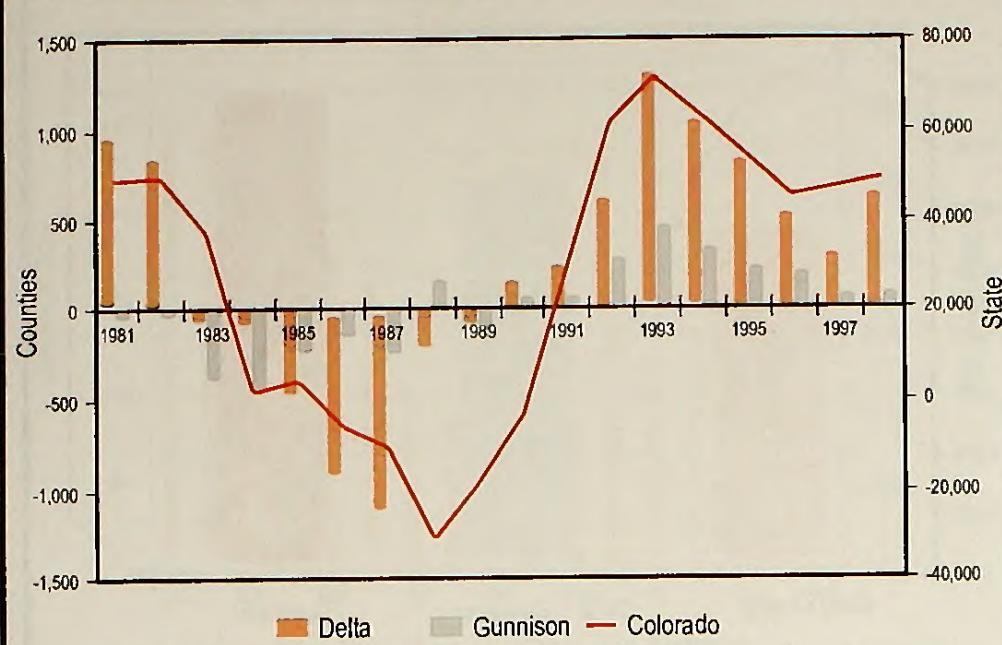


NOTE:
(1) These are counties in Colorado

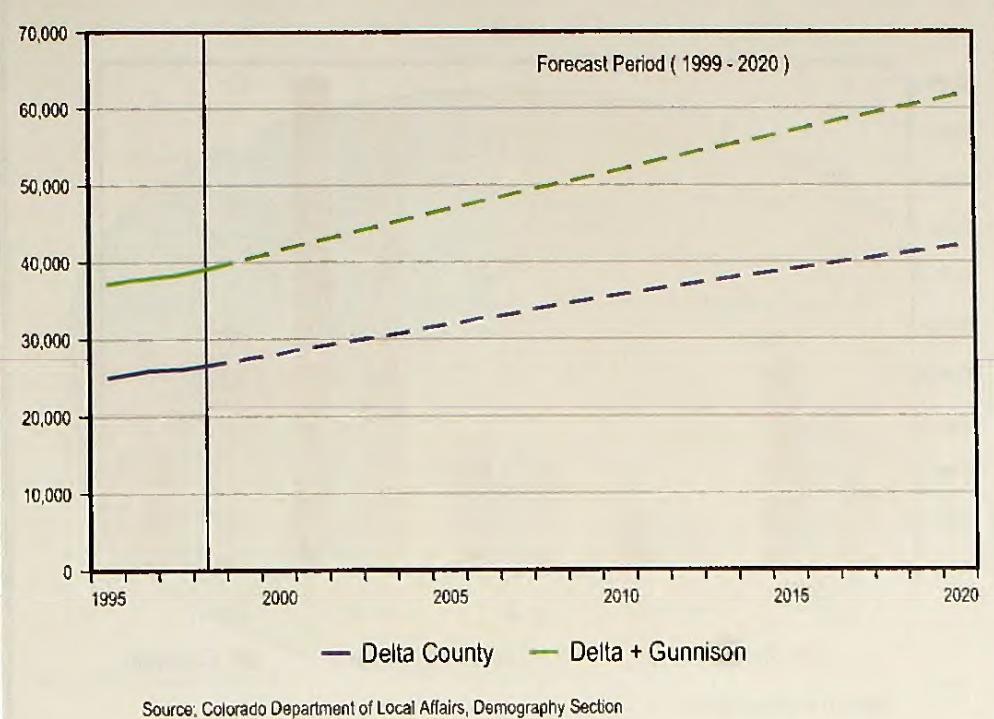
EXPLANATION

- PRIMARY STUDY AREA
- SECONDARY STUDY AREA
- BOUNDARY OF TERTIARY STUDY AREA

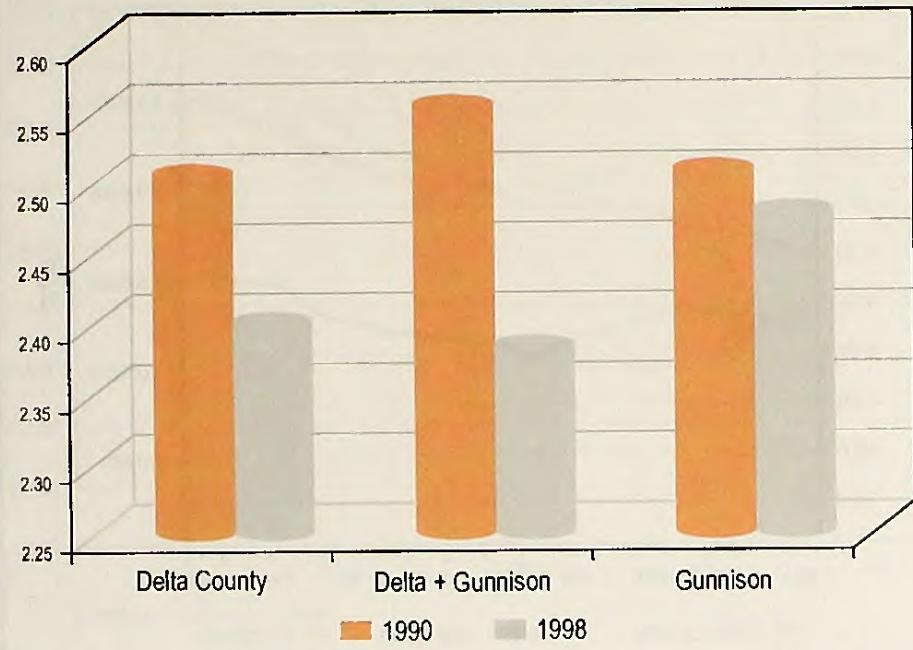
North Fork Coal DRAFT EIS
FIGURE L1
SOCIOECONOMIC STUDY AREAS



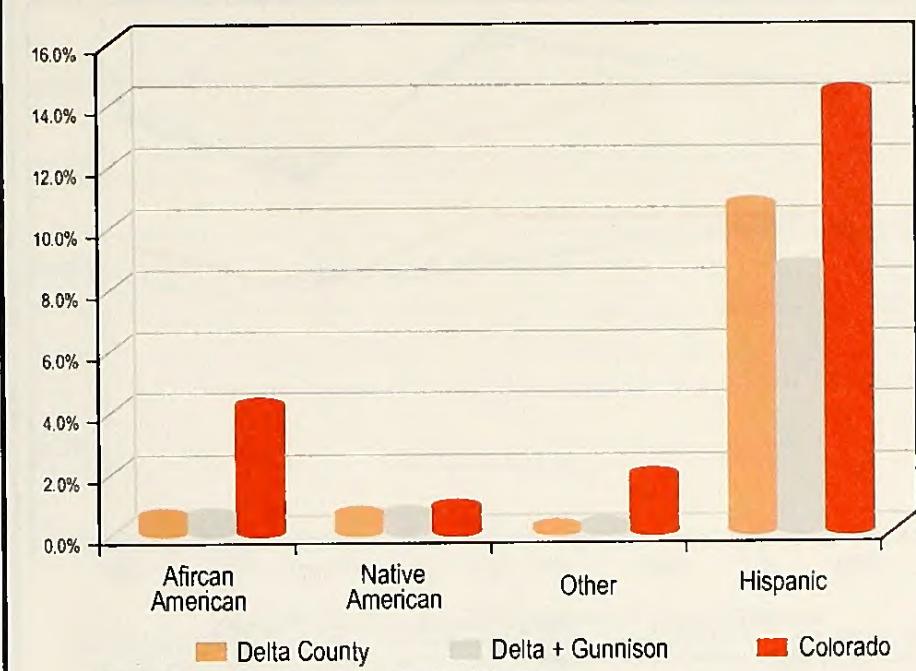
North Fork Coal DRAFT EIS
FIGURE L-2
NET MIGRATION TREND (1981 - 1998)



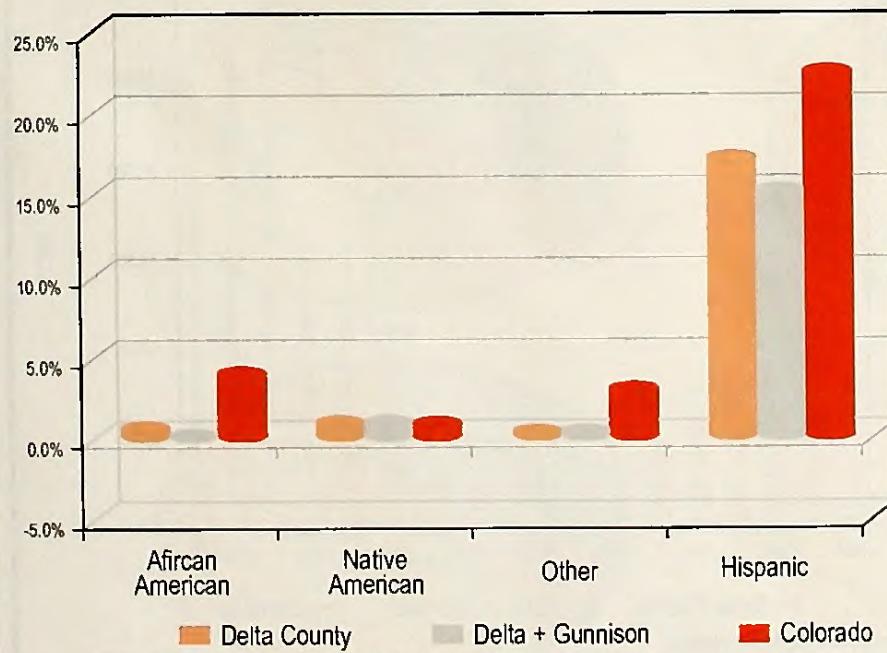
North Fork Coal DRAFT EIS
FIGURE L-3
POPULATION FORECAST (1995-2020)



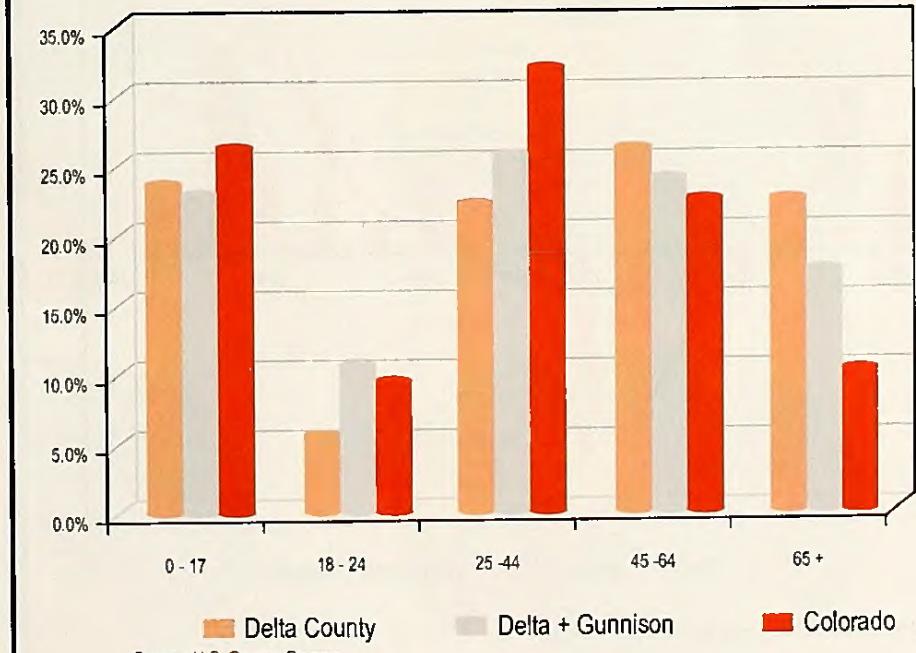
North Fork Coal DRAFT EIS
FIGURE L-4
CHANGES IN HOUSEHOLD SIZE (1990 - 1998)



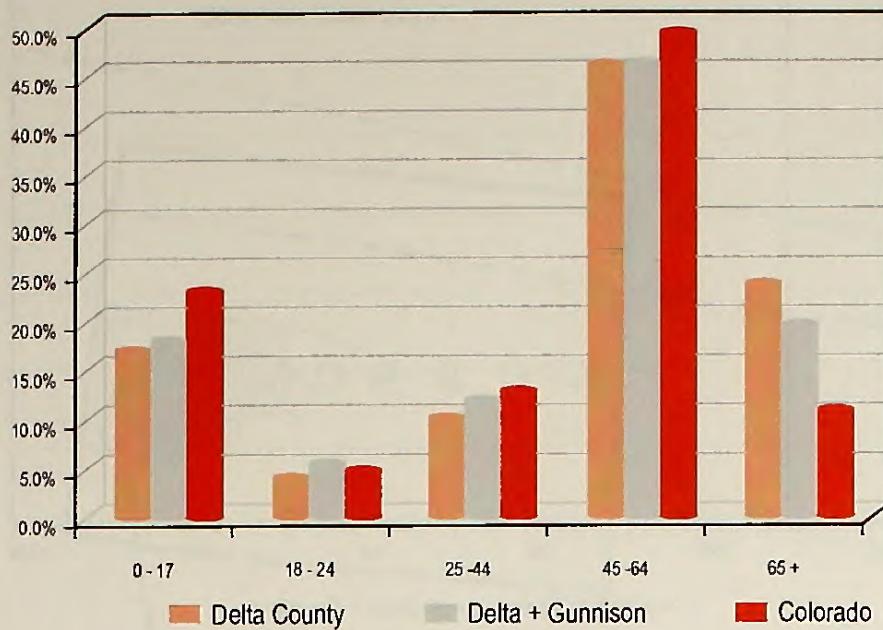
North Fork Coal DRAFT EIS
FIGURE L-5
ETHNIC BACKGROUND OF STUDY AREA POPULATIONS (1997)



North Fork Coal DRAFT EIS
FIGURE L-6
CHANGE IN ETHNIC BACKGROUND OF STUDY AREA POPULATIONS (1990 - 1997)

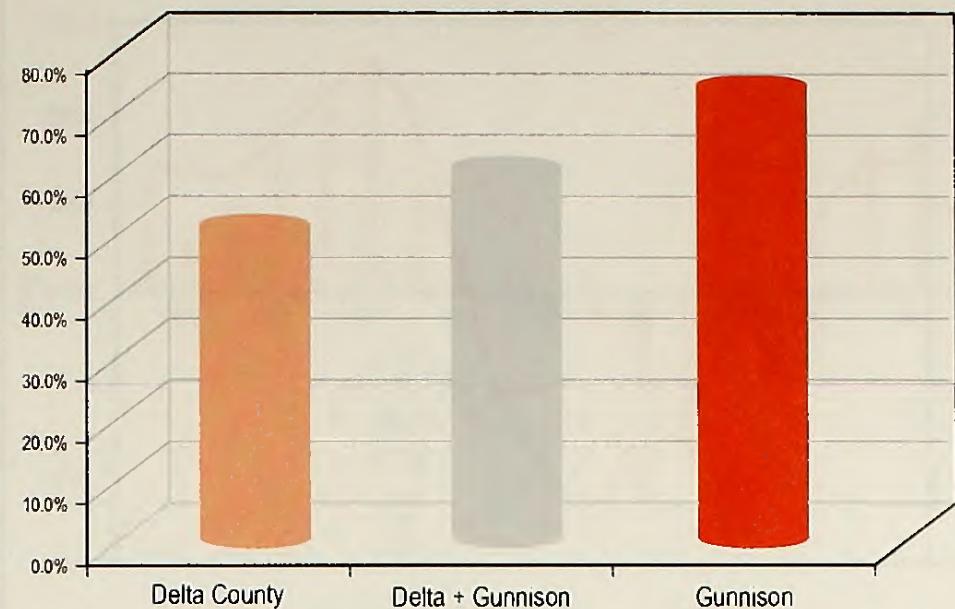


North Fork Coal DRAFT EIS
FIGURE L-7
POPULATION AGE CHARACTERISTICS (1997)



Source: U.S. Census Bureau

North Fork Coal DRAFT EIS
FIGURE L-8
CHANGES IN POPULATION
AGE CHARACTERISTICS (1990 - 1997)

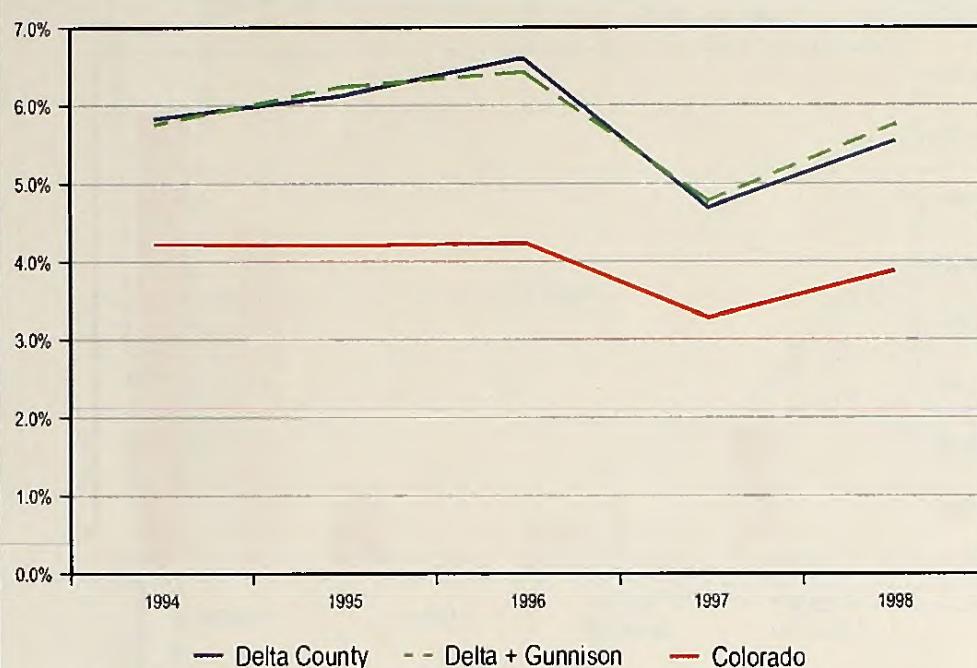


Source: U.S. Census Bureau & Colorado Department of Labor & Employment

North Fork Coal DRAFT EIS

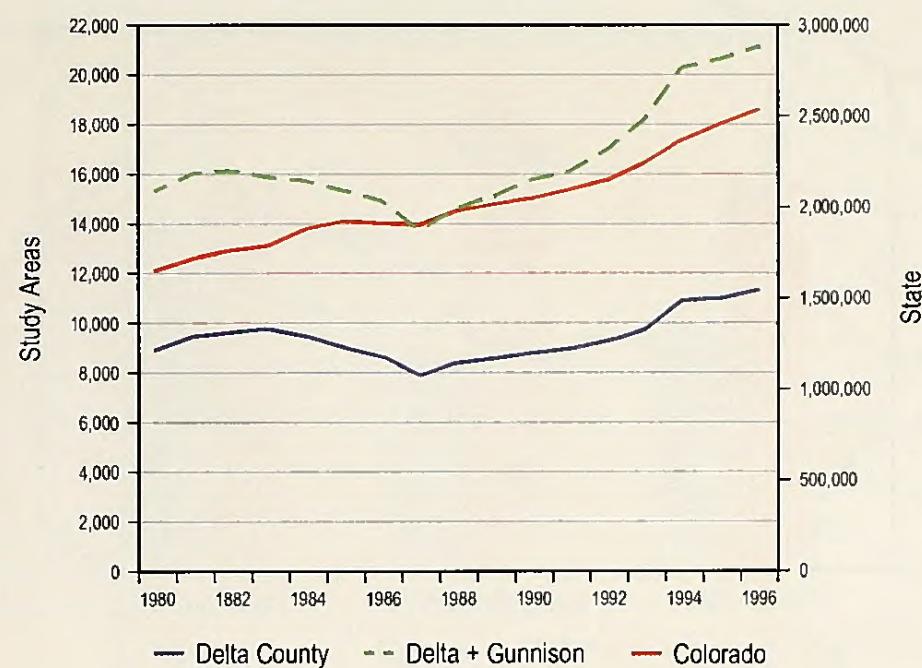
FIGURE L-9

LABOR FORCE PARTICIPATION RATE (1997)



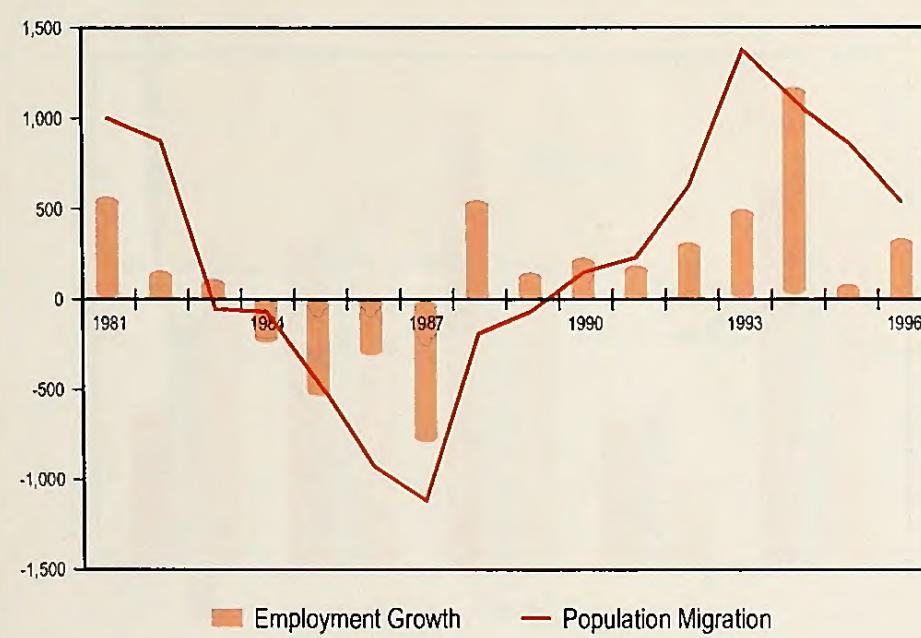
Source: Colorado Department of Labor & Employment

North Fork Coal DRAFT EIS
FIGURE L-10
UNEMPLOYMENT RATE TRENDS



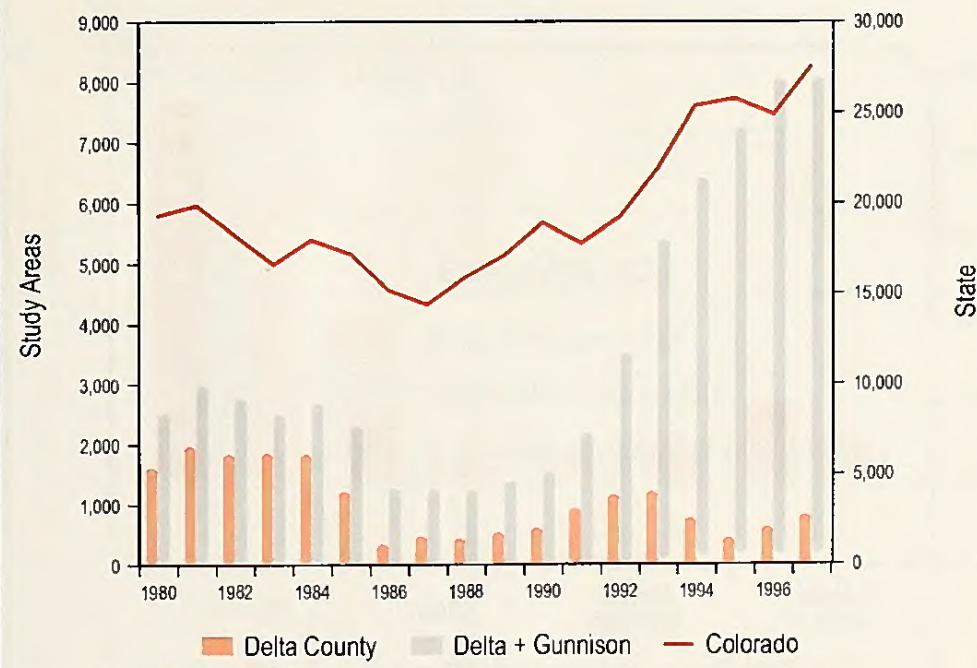
Source: Bureau of Economic Analysis

North Fork Coal DRAFT EIS
FIGURE L-11
TOTAL EMPLOYMENT TRENDS
(PART & FULL- TIME EMPLOYEES)



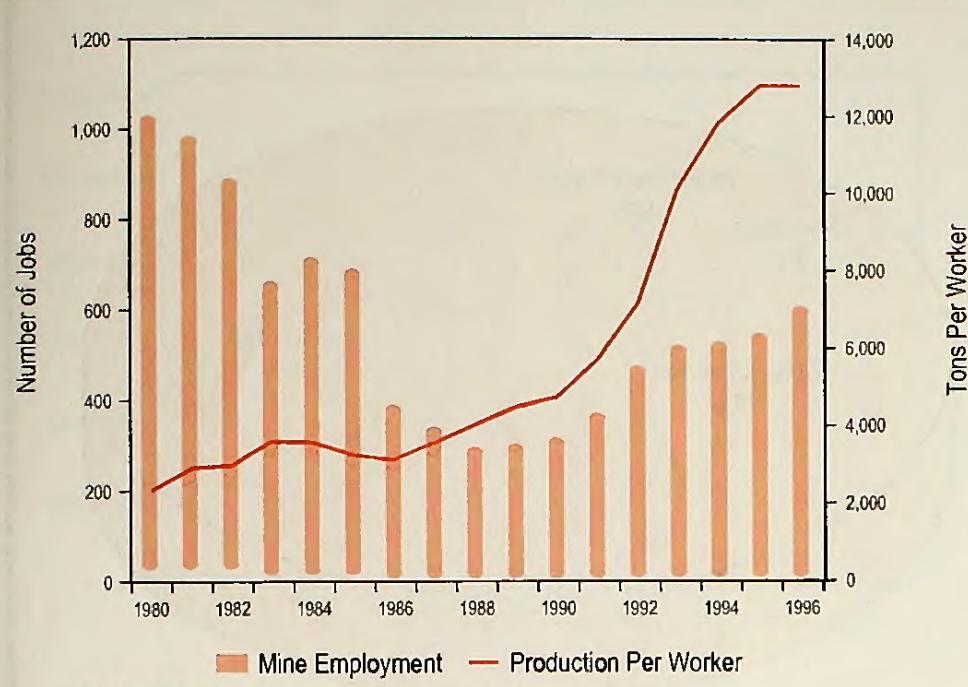
Source: Bureau of Economic Analysis and U.S. Census Bureau

North Fork Coal DRAFT EIS
FIGURE L-12
DELTA COUNTY EMPLOYMENT
GROWTH & POPULATION MIGRATION TRENDS

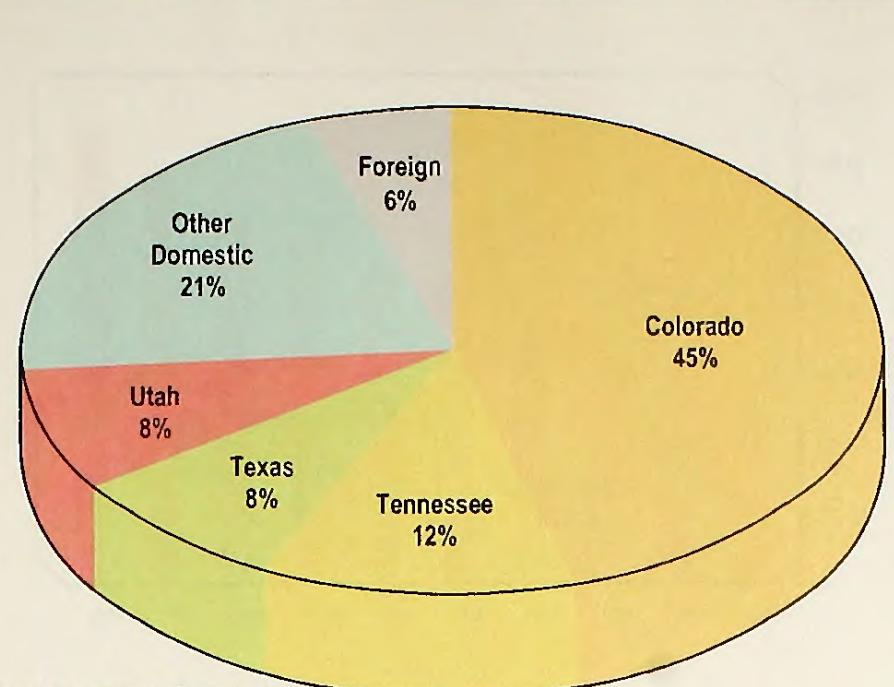


Source: U.S. Department of Energy

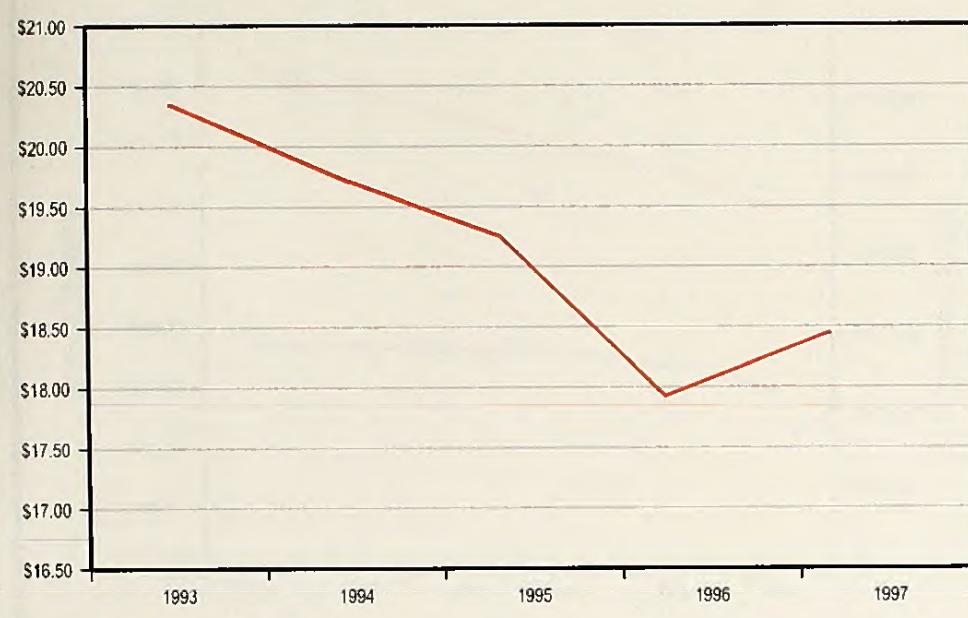
North Fork Coal DRAFT EIS
FIGURE L-13
COAL PRODUCTION TRENDS
(1000s Short Tons)



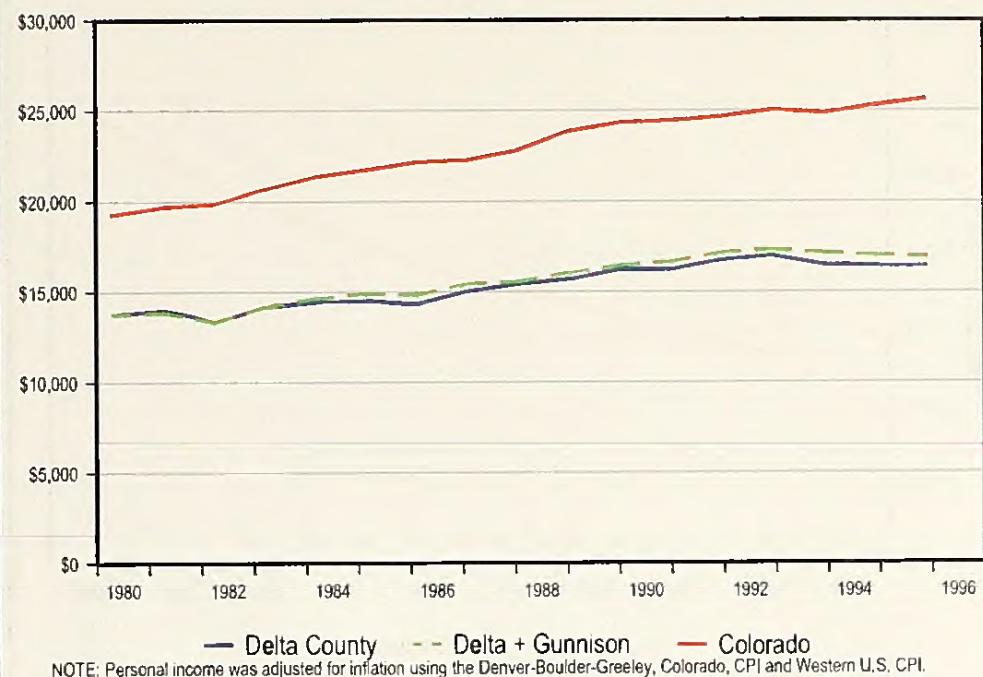
North Fork Coal DRAFT EIS
FIGURE L-14
COAL MINING PRODUCTIVITY TRENDS IN DELTA & GUNNISON COUNTIES (1000s Short Tons)



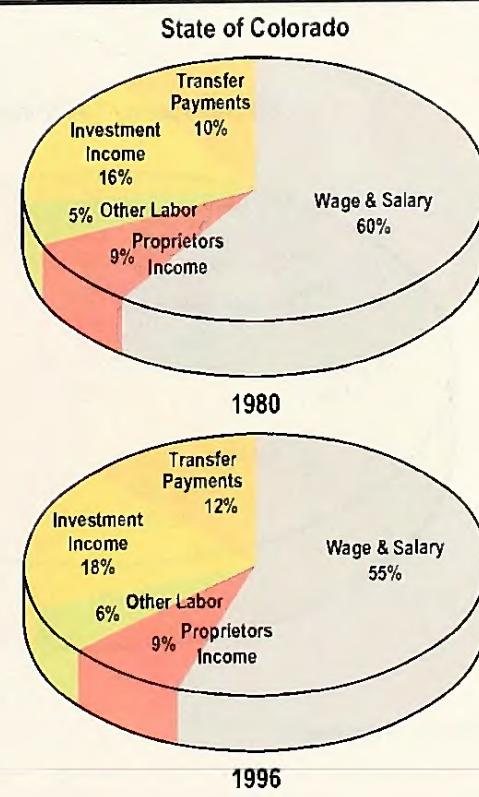
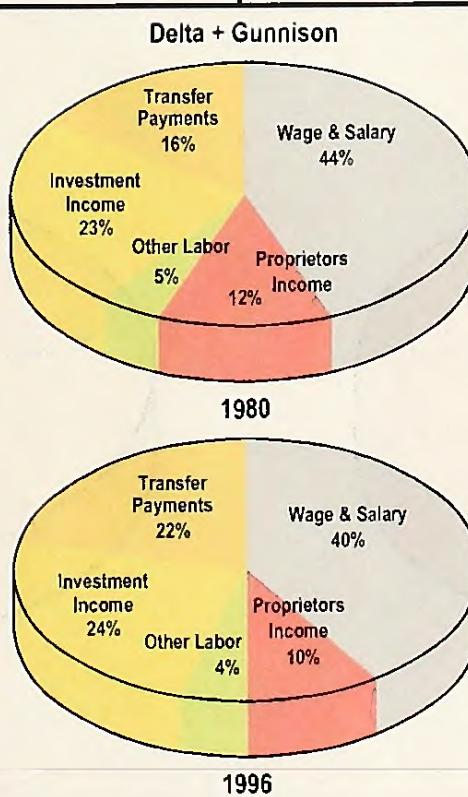
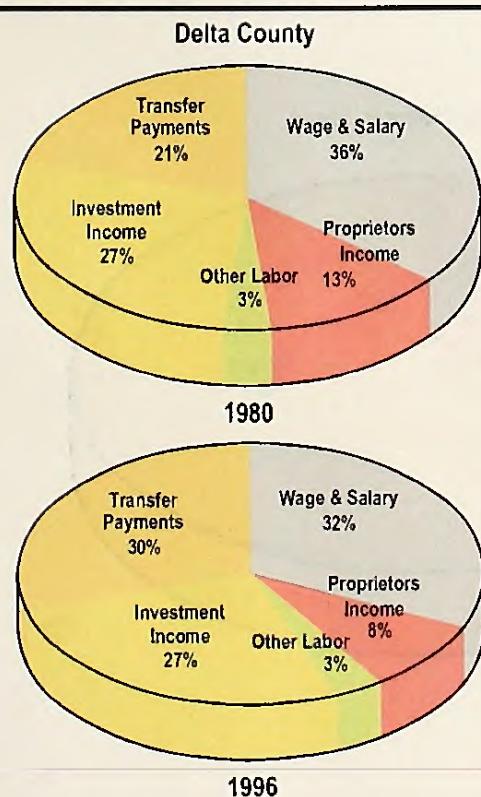
North Fork Coal DRAFT EIS
FIGURE L-15
DISTRIBUTION OF COLORADO COAL SALES (1997)



North Fork Coal DRAFT EIS
FIGURE L-16
AVERAGE MINE PRICE OF COLORADO COAL

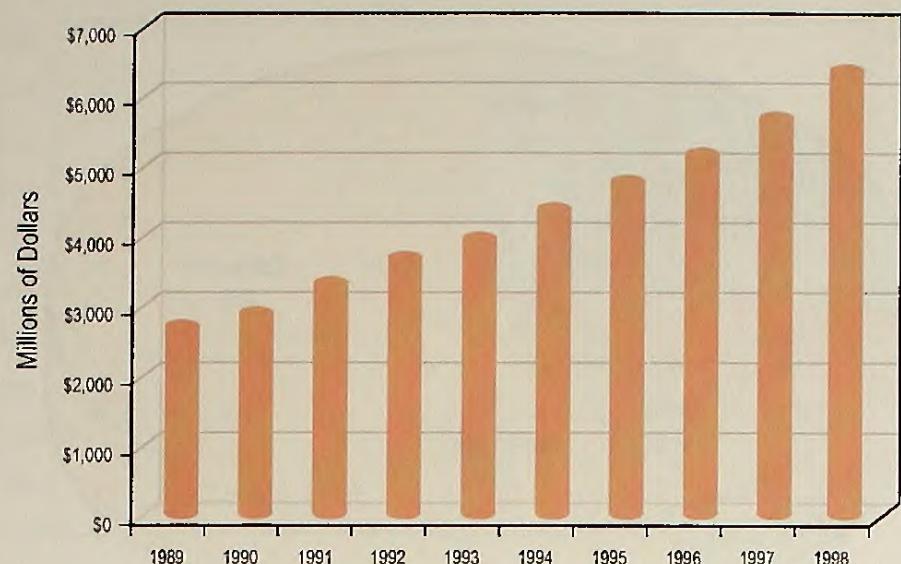


North Fork Coal DRAFT EIS
FIGURE L-17
TOTAL PERSONAL INCOME PER CAPITA (Inflation Adjusted)



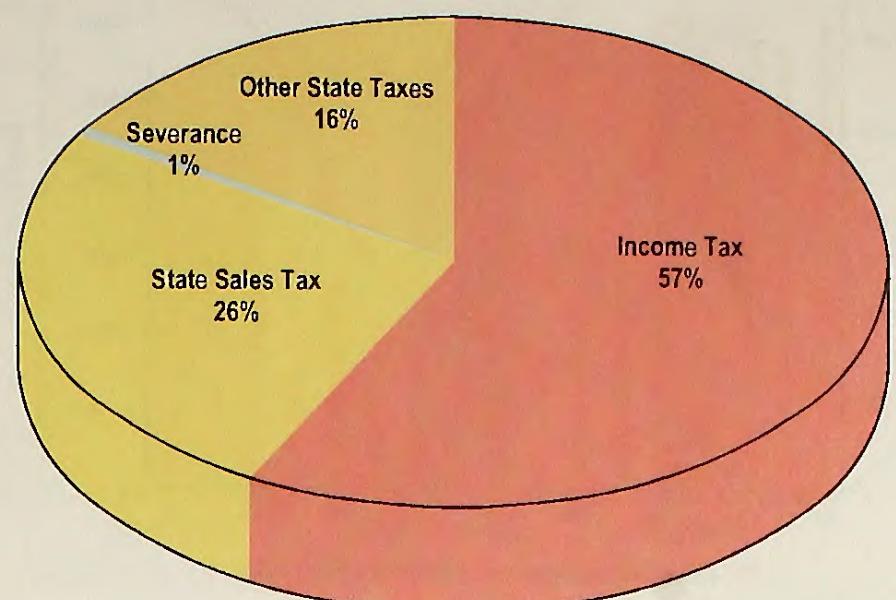
North Fork Coal DRAFT EIS
FIGURE L-18
SOURCES OF PERSONAL INCOME

Source: Bureau of Economic Analysis



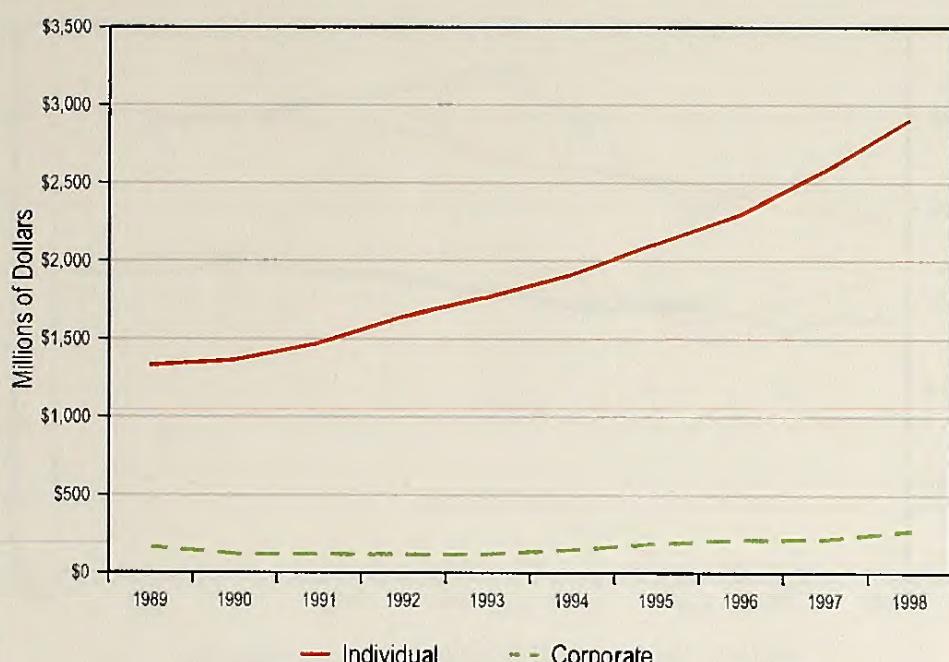
Source: Colorado Department of Revenue

North Fork Coal DRAFT EIS
FIGURE L-19
NET STATE & LOCAL REVENUE COLLECTIONS



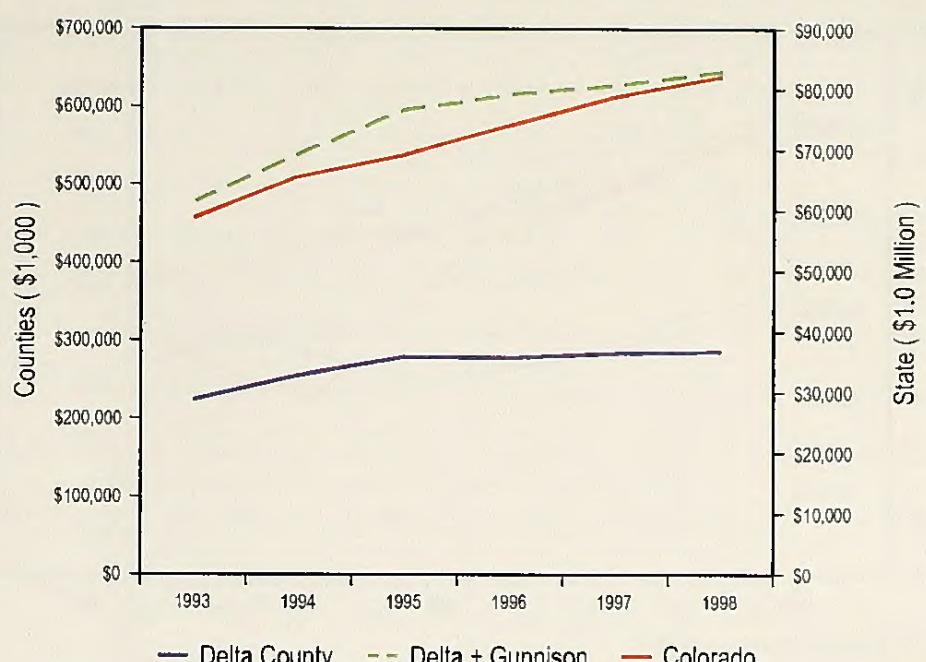
Source: Colorado Department of Revenue

North Fork Coal DRAFT EIS
FIGURE L-20
MAJOR SOURCE OF COLORADO STATE TAX COLLECTIONS (1998)



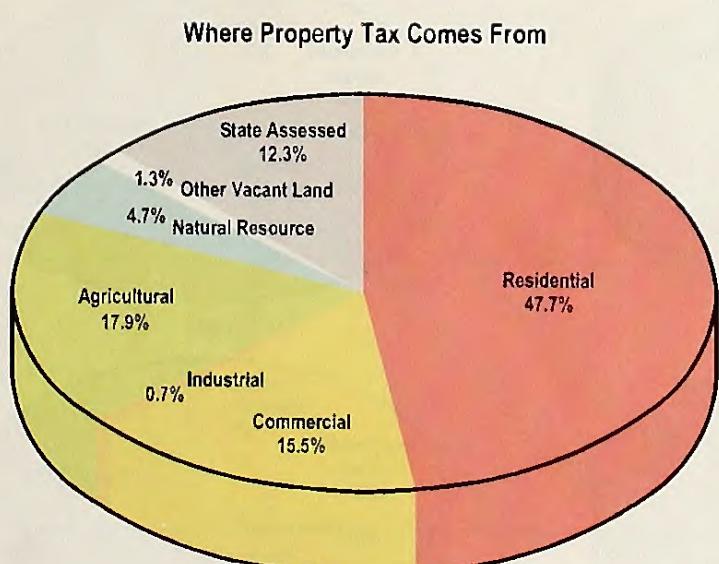
Source: Colorado Department of Revenue

North Fork Coal DRAFT EIS
FIGURE L-21
STATE INCOME TAX COLLECTIONS (1989 TO 1998)

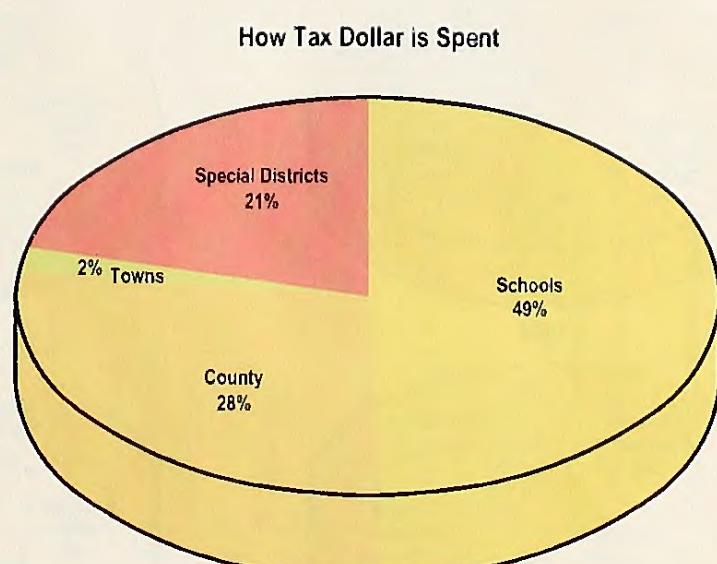


Source: Colorado Department of Revenue

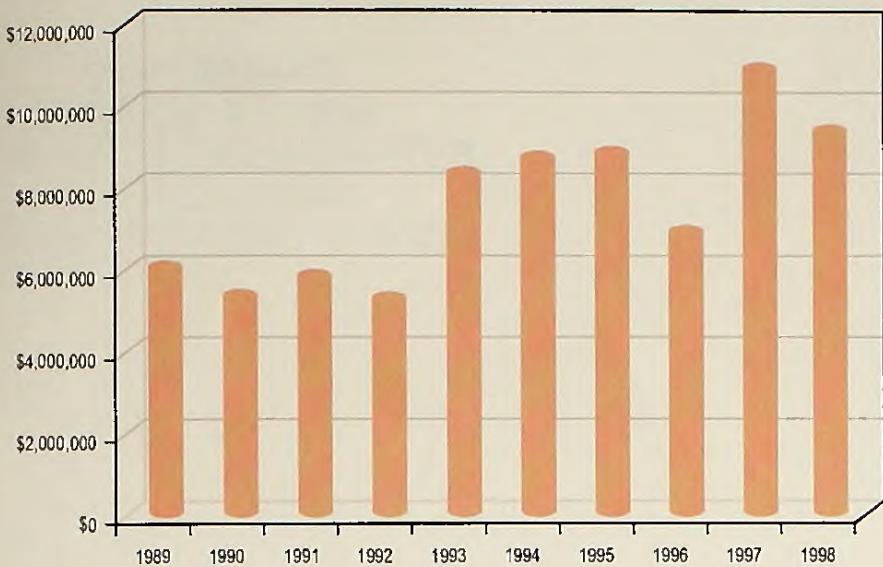
North Fork Coal DRAFT EIS
FIGURE L-22
RETAIL SALES TRENDS (1993 - 1998)



Source: Delta County Assessor

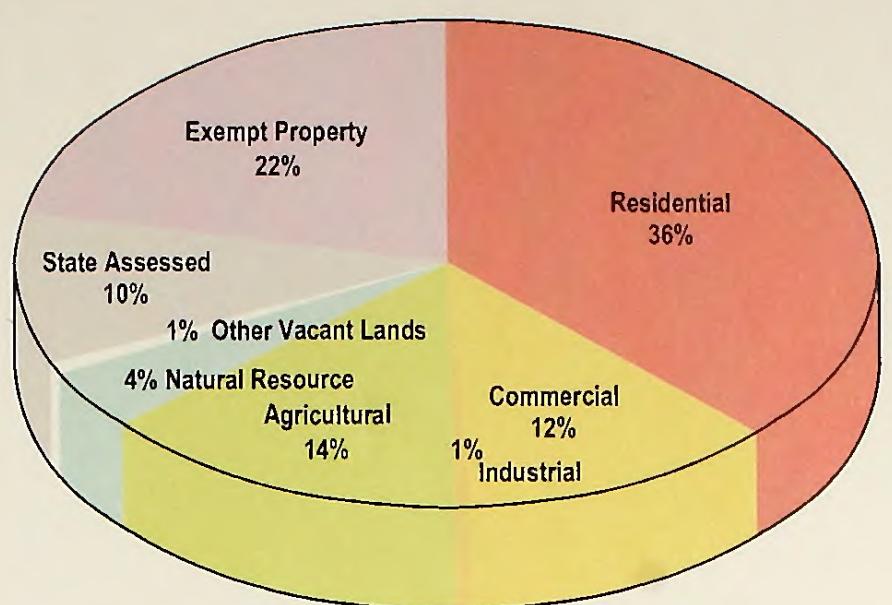


North Fork Coal DRAFT EIS
FIGURE L-23
1998 DELTA COUNTY PROPERTY TAXES



Source: Colorado Department of Revenue

North Fork Coal DRAFT EIS
FIGURE L-24
STATE COAL SEVERANCE TAX TRENDS
(1989 - 1998)



Source: Delta County Assessor

North Fork Coal DRAFT EIS
FIGURE L-25
DELTA COUNTY ASSESSED VALUES
(1998)

BLM LIBRARY
BLDG 50, ST-160A
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, COLORADO 80225



**Third Party Contractor
S Edwards Inc.**